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ORIGINAL ARTICLES

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TRACHEO BRONCHIAL DIPHTHERIA.*

HOMER DUPUY, M. D.,

We, perhaps, flattered ourselves that we had sounded and explored all the depths and shoals relating to Diphtheria. But have we exhausted the subject? For instance there has been very little said or written about that anatomical type of diphtheria which begins in the lower respiratory tract. It is not unlikely that a primary invasion of the trachea and bronchi is of more frequent occurrence that we suspect. The lamented (1) Lynah of New York made a notable contribution on this subject. I reported several cases before the (2) Southern Medical in 1921. A primary implantation of diphtheria in the larynx is now a common observation. The early and noticeable voice disturbance quickly attracts attention to the nature of the trouble. But this signal of dysphonia is wanting when the site of the local lesion is well below the larynx. There is no alteration of the voice. Moreover, there is not the faintest evidence of membranous deposit in the nose or throat. Hence the delay in making a diagnosis. Oftener there is not the slightest suspicion of the true nature of the affection. Tracheo-bronchial diphtheria may be mistaken for broncho-pneumonia or capillary bronchitis. Treating it as such, a fatality must inevitably be the outcome. Our post mortems in the Charity Hospital have proven this beyond the peradventure of a doubt. When the invasion begins in the lower air-tract the microscope is of no assistance. The usual cultures taken from the throat will of necessity be negative. For the infection is not in that area. The patient will most probably die long before the membranous exudate extends upwards. And owing to technical difficulties, even cultures taken within the trachea may be negative.

So it is that we are driven to the clinical picture as our only source of reliance in making the diagnosis. The most suspicious sign of brewing trouble is the gradual onset, as a rule, of a persistent and progressive dyspnoea which increases to that degree when there is "tirage," or sinking in of the suprasternal and diaphragmatic regions.

At first the breathing is wheezy and noisy not unlike that heard in asthmatic attacks. Inspiratory stridor soon manifests itself and dominates the symptom-complex. There is a croupy cough, but the voice is clear—unaltered—and this is a very significant fact. There is "air-hunger" with the restlessness and frequent change of posture accompanying this pathetic state. While the toxemia is reflected in the rapid heart action and rise of temperature, the dominant signal of distress is the mechanical obstruction to breathing. Unquestionably, differentiation from other respiratory affections in some cases will prove a perplexing problem. But the knowledge that this type of diphtheria is with us opens a new avenue for thought. We will, and we must find the

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way to diagnose with certainty such a condition.

Case 1—Miss Pedau, trained nurse at Hotel Dieu, complained of a "bad cold" April 2, 1923. Seen by Dr. Louis Levy April 4, 1923, who immediately recognized that there was some deep seated trouble in the lower respiratory apparatus other than the more common ailments. Pneumonia, broncho-pneumonia, and asthma were excluded. I was called by Dr. Levy who considered the patient as being very sick. She presented marked dyspnoea, an anxious look, cyanosed finger tips. There was suprasternal and diaphragmatic retraction. Inspiratory stridor heard over the trachea. The cough was croupy but the voice was perfectly normal. Nose and throat showed no signs of any membranous formation. The laryngoscope revealed a normal-looking larynx. Below the larynx, a mass of membrane protuded from the lumen of the tra- culture of B. acidophilus to 1 c. c. of chea. Diagnosis: Tracheo-bronchial diphtheria. 20,000 units anti-diphtheritic serum given. Culture taken from trachea. Dr. Couret reported positive diphtheria. April 5, decided improvement; April 6, temp. 102; resp. 24; pulse 118. Dyspnoea returned and patient complained of difficulty in breathing. 20,000 units of serum again given. April 7, dyspnoea completely disappeared, temp. 99; pulse 98; resp. 20. Two control cultures April 16-18 negative. Uneventful recovery. Remarks: Dr. Levy's appreciation that the symptom-complex was not that usually seen in purely pneumonic and bronchial affections led to an early diagnosis. The drawing of the laryngoscopic image by Dr. Jules Dupuy we believe to be among the first of its kind in which a tracheal diphtheritic membrane is pictured through the laryngoscopic image.

Case 2—Baby Beatrous, age 18 months. Normal, healthy looking. On night of May 9, 1923, the baby seemed cross, irritable, with temp. 99. Purgative and alkaline sol. prescribed. Next morning croupy, and respirations labored. Absolutely no hoarseness. Syr. Ipecac prescribed. May 10, toward evening, pronounced respiratory effort. Child tossing and frequently changing position in bed. Decided "air-hunger." Temp. 101. Culture from throat negative for diphtheria. Nose and throat normal. Dr. M. P. Boebinger saw the patient and made a diagnosis of Tracheo-Bronchial diphtheria. Dr. Homer Dupuy called in consultation verified this diagnosis. 20,000 units of antitoxin given at 10 p. m. Within a few hours there was a perceptible improvement in the breathing. By noon the next day the dysnoea had disappeared. The child seemed practically well. Remarks: We have here a rather sudden onset. The absence of any membrane in the throat, croupy cough, the notably clear voice. Inspiratory stridor heard over trachea. The progressive dyspnoea clinched the fact that in 98 cases out of 100 this was diphtheria involving the lower air tract. The rapid cure with a large dose of serum confirmed this. Credit is due Dr. Boebinger for an early diagnosis.

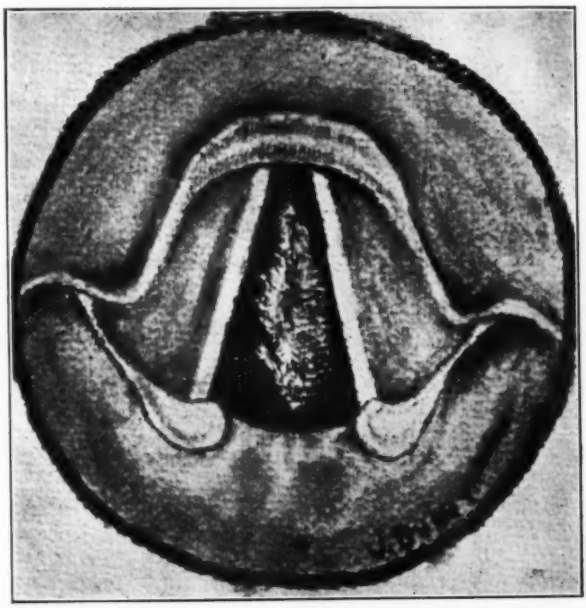
DISCUSSION.

Dr. Jacobs: As a matter of interest, I should like to say a few words about a case I had a few years ago. I gave the child 10,000 units of serum. I made a culture from the throat and the report from the Board of Health was negative. The child was admitted to Presbyterian Hospital and the trachea was practically clear, though cultures came back staphylococcus, but there was nothing to be seen. I believe Dr. Patton had a similar case in the hospital.

Dr. Johns: While I also, with Dr. Dupuy, deplore the lack of laboratory help in diagnosing laryngeal and tracheal diphtheria, I cannot help but feel that ear, nose and throat specialists do not take full advantage of the laboratory where it is possible to help. For instance, the routine puncture of ear drums to my knowledge is never routinely accompanied by the examination of the discharge by direct smears or cultures. Two cases this past winter have brought this out to me very forcibly. In the first instance I was called to make a spinal puncture on a moribund baby which had had both ear drums lanced and with the history that only a small amount of discharge had been obtained. Smears and cultures both showed innumerable diphtheroid bacilli and the cultures bore out the diagnosis of diphtheria. Spinal fluid was normal, but the baby died of the diphtheritic toxemia. The second case was an ear in a small child that had been discharging pus for about four months and was accompanied by occasional rise of temperature, considerable anemia and other evidences of severe toxemia. Diphtheria bacilli were demonstrated in both smears and cultures.

Dr Dupuy (closing): I was in hopes that some of the internists would enlighten us relative to making a differential diagnosis between this anatomical type of diphtheria and broncho pneumonia and capillary bronchitis. Tracheo-bronchial diphtheria must be so fatal a disease, owing to the large surface involved with the concomitant large absorp-

From Lynah. Shows membrane in bronchi and in lower trachea.



Drawn by Dr. Jules Dupuy from the Laryngoscopic Image.' Case 1.

tion of toxins, that early diagnosis is essential if we are to prevent a fatality. Certainly this affection involving only the lower air tract must be with us oftener than we suspect. Given a marked dyspnoea with a perfectly clear voice, with an obstruction to the incoming current of air in one lung, with an emphysematous picture giving the chest the usual barrel shape, we are justified in suspecting diphtheria of the tracheo-bronchial area. As already emphasized we cannot rely on the microscope as the membrane is low down and the throat is absolutely free from any exudation. Here is a field in which the bronchoscope and direct laryngoscopy will prove very helpful in arriving at the correct diagnosis.

ELIMINATION OF B. COLI FROM CULTURES BY INOCULATION WITH B. ACIDOPHILUS.*

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Bacillus coli is a constant inhabitant of the intestinal canal of man and all warm blooded animals. It is one of the chief gas producing, putrefactive bacteria in the intestinal flora of man. Measures intended to reduce or prevent putrefaction in the intestinal canal must reduce or prevent the growth of B. coli and other putrefactive bacteria. Altough it does not necessarily follow that what occurs in the test tube in this regard would also occur in the intestinal canal or vice versa, we thought that it would at least be interesting to see what the results would be if cultures of B. Coli were inoculated with B. acidophilus. It will be remembered that we already have abundant evidence that inoculation of the food in the intestinal canal with sufficient quantities of B. acidophilus causes rapid reduction and sometimes practically complete elimination of B. coli from the feces.

At first we attempted to more or less duplicate in the test tube the conditions which are provided in the intestinal canal by feeding milk cultures of B. acidophilus daily with meals. A tube of 1 c. c. sterile milk was inoculated with o. 1 c. c. 24-hour broth culture B. coli communis and in addition o. 1 c. c. of a 24-hour milk culture of B. acidophilus (acidophilus milk). Plates made from this immediately after inoculation showed 94% B. coli and 6% B. acidophilus. This was incubated for 48 hours. Plates made at this time showed no B. coli and 100% B. acidophilus. Thus B. coli in milk were reduced from 94% to none within a period of 48 hours by inoculation with o.1 c. c. milk culture of B. acidophilus to 1 c. c. of the colon infected milk. This is considerably lighter inoculation than is brought about in the digestive tube when a patient drinks 500 to 1000 c. c. of acidophilus milk daily with meals.

In another experiment with B. coli communis, 1 c. c. of milk was inoculated with o.1 c. c. 24-hour broth culture of the colon bacillus and in addition o. 1 c. c. of a 24-hour milk culture of B. acidophilus (acidophilus milk). Plates were made at once and these showed 94% B. coli and 6% acidophilus. The inoculated tube was incubated for 24 hours. Plates were again made and these showed about 1% B. coli and 99% B. acidophilus.

One-tenth c. c. of this milk still containing a few B. coli was added to 1 c. c. sterile milk. To this was added o. 1 c. c. 24-hour culture of B. acidophilus (acidophilus milk). This was incubated for 24 hours and plates were then made. These showed no B. coli present. In this case B. acidophilus reduced the B. coli to about 1% in 24 hours and again caused them to disappear entirely in 48 hours.

Exactly similar experiments were made using a broth culture of B. coli *communior* in place of *communis*. The quantities' time and conditions of the experiments were otherwise the same. The results were the same as those obtained with B. coli communis; viz, that colon bacilli were reduced to about 1% in 24 hours and eliminated entirely in 48 hours.

To what extent these test tube results can be transferred to the digestive tube must be determined by other experiments. It is reasonable to expect that whenever the diet consists of sterilized milk and other equally favorable food, somewhat similar results may follow ingestion of milk cultures of B. acidophilus. If so, B. coli should be quickly eliminated from the digestive tube following ingestion of appropriate quantities of acidophilus milk, provided the only food taken consists of sterilized milk or other equally appropriate material.

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THE POSSIBILITY AND PRACTICABILITY OF TRANSFORMATION OF THE INTESTINAL FLORA BY FEEDING MILK CULTURES OF BACILLUS ACIDOPHILUS.*

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If we examine microscopically the feces of the average individual, we find that they consist mostly of large numbers of bacteria of different kinds and in addition thereto, usually a smaller amount of undigested food particles. If we employ appropriate cultural methods, we are able to isolate from the feces pure cultures of many different strains and type of bacteria, the relative proportions of these varying greatly with different individuals and under different conditions. Although some bacteria of many different species are taken in with the food and drink, these constitute only a fraction of those found in the feces. Therefore these bacteria have grown in the digestive tube and it is known that a large part of the multiplication takes place low down, particularly in the colon. The digestive tube is a favorable culture tube and the food in different stages of digestion, contained therein, furnishes favorable culture media.

If these bacteria which can be isolated from the feces in pure culture are grown in suitable culture media, which we make from ordinary food substances, we find that some of them are capable of producing in the culture tube numerous toxic substancesof complex nature. Some of them produce gases and some cause putrefaction of animal proteins. It is these putrefactive bacteria that produce toxic substances. There is good reason to believe and, in fact, we know that these bacteria produce similar substances when growing in the digestive tube. It is generally believed that these products of bacterial decomposition in the intestinal canal, and especially of putrefaction, may be absorbed into the system and may have more or less harmful effects.

The theory of autointoxication was perhaps first advanced by Senator (1) in 1868. Bouchard (2) claimed that the amount of the end products of putrefaction demonstrable in the urine was a measure of the putrefaction in the intestinal canal. The theory was further popularized by Metchnikoff (3) who believed not only that the toxins produced in the intestinal canal were the cause of various diseases and abnormal conditions, but that they actually caused aging of the tissues of the body, senescence, and particularly premature old age.

Metchnikoff's claims attracted still greater attention because he proposed a method of controlling or preventing the growth of harmful bacteria in the intestinal canal by deliberately feeding cultures of other harmless bacteria. The B. bulgaricus was selected. The theory was that this organism would multiply in the intestinal canal and thereby crowd out the other bacteria.

Later researches, perhaps the first in 1908 by Herter and Kendall (4), have shown that B. bulgaricus not only cannot multiply but that it cannot live in the lower part of the intestinal canal. Large quantities of cultures of this organism may be taken in the form of milk cultures or otherwise, but none appear in the feces. In spite of this fact, which has been confirmed by numerous investigators, "B. B." preparations are still widely prescribed, thanks to the advice of the detail man and the literature put out by commercial interests.

The intestinal flora of the normal healthy nursling is much simpler than that of the older child or adult and, in fact, consists almost entirely of two species, B. bifidus and B. acidophilus. B. bifidus is more numerous during the first few weeks or months, but as soon as the baby begins to take some other food besides breast milk, B. acidophilus usually predominates. As the individual grows older, however, this organism which predominates in the intestinal flora during early childhood gradually gives place to the conglomerate flora of the older person. Nevertheless, a few acidophilus bacilli can usually be demonstrated at any period of life.

Please note that B. acidophilus is a normal inhabitant of the intestinal canal and that it can multiply there to the extent of becoming the predominating organism present. Another fact to note is that its normal habitat is chiefly the lower part of the digestive tube,

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the part where the other supposedly harmful bacteria also grow most luxuriantly.

The growth of B. acidophilus in the intestinal canal is influenced largely by the diet of the individual. Lactose and dextrin are both especially favorable and, in fact, we can feed temporarily and experimentally a sufficient quantity of these substances to transform the intestinal flora from the usual mixed type to a much simpler one dominated by B. acidophilus and containing few or no putrefactive bacteria. It requires rather large quantities of these sugars, usually 300 grams or more daily, to bring about this result.

No doubt the presence of much lactose in the diet of the nursling is an important factor leading to the maintenance of the usual B. acidophilus flora.

Taking large quantities of cultures of B. acidophilus also leads to rapid transformation of the intestinal flora in most instances, provided the diet is at all favorable. This method of changing the intestinal flora and thereby preventing intestinal putrefaction has recently been impressively brought to notice by Rettger and Cheplin (5), of the Sheffield Scientific Laboratories of Yale University.

These investigators have shown by experiments on animals (rats) and on man that by feeding sufficiently large quantities of a fresh culture of B. acidophilus in milk, which they call "acidophilus milk," the intestinal flora may be simplified, the putrefactive bacteria being greatly reduced and B. acidophilus being established as the dominating organism.

In our own investigations we have endeavored to learn more of the fundamental influences which determine the intestinal flora and to apply this information in attempts to improve methods whereby transformation of the intestinal flora may be brought about in the most effective and practical manner. Brevity precludes giving much details here.

When properly produced, acidophilus milk makes a choice beverage. In fact, it is considered by most of those who have tried it, as the most palatable form of sour milk (or buttermilk) they have ever tried. Twenty-four hour cultures are most palatable and are most useful for the purpose.

To get best results, the acidophilus milk should be taken with the meals, preferably some with each meal. The object is to heavily inoculate the food with viable bacilli. The quantity required is from one pint to one quart daily. Practically, a glass of acidophilus milk with each meal gives best results.

In persons taking acidophilus milk in this way, the number of B. acidophilus in the feces rapidly increases with corresponding decrease and sometimes practical disappearance of all other bacteria. A high degree of transformation is accomplished within a period of from 4 to 10 days, and this is usually maintained as long as the acidophilus milk is continued.

Coincidentally with the transformation of the flora, the feces change from the former neutral or alkaline reaction to the slightly acid reaction characteristic of the feces of the normal healthy baby.

In conclusion, by feeding a milk culture of a supposedly harmless organism, B. acidophilus, it is now possible and practical to transform the intestinal flora so that the putrefactive bacteria are greatly reduced or entirely eliminated. It remains for the future to show what, if any, therapeutic value this may have.

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DISCUSSION.

Dr. Eustis: I do not like to see this paper go by without discussion. Dr. Bass has brought out two very important points which I find most of the clinicians overlook. He stated that diet plays an important part; as he states, you cannot transform the intestinal flora by diet alone; on the other hand, we cannot expect to get B. Acidophilus unless we have food for them to grow on. I have watched these not only from the clinical

standpoint, but from the examination of the urine, and I find that lactose gives the B. acidophilus something to grow on and plays an important part in diet.

Now there is one more point in regard to the B. bulgaricus. Dr. Bass stated that it has never been known to grow in the intestines. If introduced into the stomach they will not grow, but if introduced into the duodenum they certainly will. It is the H Cl of the stomach that kills them.

Dr. Johns: I thing that the really important thing brought out in this work of Drs. Bass and Jones is that it is actually possible to cause a complete transformation of the intestinal flora with Bacillus acidophilus, though the vast majority of cases where other set experiments with such bacteria as Bacillus bulgaricus were made have failed even under purely experimental conditions. People cannot be treated intelligently until this fact has been established. The problem now resolves itself into the question of studying cases and knowing just what kind of cases to apply it on before we can expect to get any favorable results. Most of the experimental cases that they have been working with have been undiagnosed cases with all sorts of vague complaints that could not be cured by any known medical means, and naturally only a few of these cases have shown definite improvement, so that the practical application of this treatment still lies in the future.

Dr. Bass: The addition of lactose to the diet has been given consideration. It has been found that it takes large quantities of lactose to accomplish very much; about ten per cent gives the best growth of B. acidophilus. A culture medium of any kind should contain about 10 per cent of lactose. We have gotten a baker here to make whole wheat bread, to which he adds 10 per cent of lactose. This bread contains a great deal of bran and other material and is a convenient fom of giving lactose. This ought to be especially useful in cases of constipation.

I am inclined to believe that we have in the past been overlooking the chief source of putrefying bacteria in the intestinal canal. We take into the gastro-intestinal canal large quantities of bacteria with our food and this is no doubt an important source of intestinal bacteria. It is very easy, if one will take the pains to do so, to avoid many of the things which do contain large amounts of bacteria.

Another source of inoculation of the intestinal contents is the mouth and teeth. The individual who does not brush his teeth well after meals has large numbers of bacteria growing in the food remnants in his mouth, including Colon Bacilli. When such an individual eats again, he very thoroughly inoculates the food he takes.

URETERAL CALCULI.*

By P. J. KAHLE, M. D.,
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Much to my surprise in going over my histories, of the many cases seen which were suspected of having ureteral calculus, I find only sixteen in which a diagnosis was made and proved, either by X-ray, by means of the waxed-tip catheter, or by having the patient pass the calculus subsequently. There were several more who were seen after an attack of renal colic and the probable expulsion of the calculus, but as the diagnosis in these cases could not be verified, I am not taking them into account. By far the largest number of cases referred, with a tentative diagnosis of ureteral calculus, were suffering from other conditions which stimulated it. It will not be uninteresting, I believe, to mention them, as a differential diagnosis had to be made. Among these conditions in which there was fixed pain in the lower lumbar region, along the course of the ureter, in the suprapubic area, in the upper abdominal quadrant, or even renal colic or pains radiating to the genitalia or over the anterior surface of the thigh, may be mentioned renal calculi, calculi in the pelvis of the kidney, nephroetosis, renal tumors with hematuria, four cases of undiagnosed renal hematuria, one case of glomerulo-nephritis with marked hematuria, ureteritis, renal infection with obstruction both intra and extra-ureteral, uro-pyelectasis, due to retrodisplacement of the uterus, pelvic inflammation, ovarian cysts, or fibroids, sacro-iliac separation, tabes, seminal vesiculitis, prostatitis, cholelithiasis, two cass of appendicitis, in which the appendix was retrocecal, and one with a retrocecal appendix that had herniated and ruptured extraperitoneally, the pus extending up to the right kidney.

On the other hand, in the cases which proved to be suffering from ureteral calculi, some had been treated and even operated for other conditions.

From the small number of cases in this series there can be no conclusions drawn, but adding this mite to the already existing fund of information on the subject may help in a small way.

On analyzing these cases it is found that the calculus or calculi occurred in the right ureter twelve (12) times, or in seventy-five (75) per cent; twice in the left or in twelve and one-half (12 1-2) per cent; and twice bilaterally, or in twelve and one half (12 1-2) per cent of the cases. Twice, or in twelve and one half (12 1-2) per cent, the cal-

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culi were multiple, and incidentally, these were the cases in which they occurred bilaterally.

Six cases, 37 per cent, were in females; and 10 cases, 63 per cent, in males.

The ages of these patients, showed that six were between 20 and 29; four between 30 and 39; three between 40 and 49; two, between 50 and 59; and one, between 60 and 65.

These figures relating to sex and to the occurence and numbers of calculi, differ from those given by observers such as Braasch and Judd, who report large series in which the element of chance is lessened. As to the age at which calculi are more frequently found, the figures conform very nicely. So too, in the localization of the calculi, there is less discrepancy, and we find that in these sixteen cases the upper third of the ureter was the seat of the calculi in two cases, 12 1-2 per cent; the lower third, including the intravesical portion of the ureter, in fourteen cases, or 88 per cent; while none were found in the middle third.

The symptoms in these cases showed that pain was present in all. There was a history of renal colic in thirteen cases; in three the pain was fixed, and had led to a diagnosis of appendicitis in two cases, and to cholelithiasis in one. Temperature was recorded in five cases; the lowest showed 100 degrees, the highest 107 degrees.

Frequency, urgency, or tenesmus, or all three symptoms, were present in fifteen cases at some time or other. In one case, no history of bladder disturbances could be obtained.

Gastro-intestinal disturbances, ranging from slight nausea to vomiting, were present in all cases having renal colic.

On examination, eleven of these patients were in splendid physical condition, while five were toxic as a result of co-existing infection and urinary stasis due to the blocked ureter or ureters. In three of these cases the kidney was enlarged and palpable, the obstructing calculus being at the pelvic brim in one case and at or near the ostium in two. There was gross hematuria in one case, microscopic blood in fifteen. Pus and bacteria were found in eight cases at some time or other, while in three cases leucocytes but no bacteria were found. Albumin, varying from a trace to 2 per cent moist, was found in ten cases. In five, no record was made at the time and I am at a loss to know whether this means that no albumin was found or whether it was not looked for. In one case no albumin was demonstrable at any time.

Fifteen of these patients were cystoscoped and the ureters catheterized; one patient, a doctor, having passed a calculus, refused cystoscopy.

Only eleven of these patients were X-rayed. Of the remaining five, no X-ray was taken, because at the time of the examination the calculi were impacted and protruding from, or presenting at the ureteral orifice in two cases; in one, because a stricture of the ureter was found and was believed then to explain all symptoms, when the patient was referred to me after having been nephrotomized with failure to find a calculus which was apparently in the pelvis of the kidney and which had been diagnosed by X-ray only; in two cases, because the calculi had been expelled and all symptoms had abated. Of the eleven cases X-rayed only six showed the presence of calculi. This was confirmed as being a shadow in the line of the ureter by ureterogram, or by the insertion into the ureter of an X-ray catheter. In this connection, the suggestion by Bransford Lewis, that metallic instruments be introduced into the ureter to the point of obstruction and that a picture be taken after having displaced the calculus by means of this instrument, in order to prove that a shadow is cast by a calculus in the ureter and not by a phlebolith or a calcified gland in the line of the ureter, seems to me to be a good one and should lessen the chances of error, especially if an ureterotomy is contemplated.

In five cases, the wax-tip catheter was used for diagnosis or for corroboration. In two of these the X-ray was positive for calculi, while in three, the plates were negative for calculi.

Five cases were successfully treated medically, although four of them had had the ureters catheterized for diagnosis and had had papaverine injected into the ureter following the diagnosis. It may be that the catheterization and the papaverine were in part responsible for expulsion of the stone. The other

passed the calculus before cystoscopy and catheterization were undertaken for diagnosis.

These patients were given at the time of the renal colic morphine 1-4 gr. and atropine 1-150 gr. This was repeated every three hours when necessary and was supplemented in three of the cases by benzyl benzoate (benzylets). In only one instance did the benzylets seem to give relief. In the other two the morphine-atropine combination had to be resumed.

In ten cases the condition of the patient, due to complications, or to failure of the expectant treatment, led to their being handled by endovesical manipulations.

In one case with bilateral multiple ureteral calculi, three calculi from the upper third of the left ureter were removed at the time of a pyelotomy for the removal of a large recurrent calculus in the left pelvis. The calculi were milked into the pelvis and removed through the incision in the pelvis. This was done, however, after five calculi in the lower third of the right ureter had been caused to pass into the bladder by dilating the ureter, first by means of the Garceau catheter no. 11, and subsequently by means of olives, up to no. 21, and the high frequency current. After each dilatation papaverine (2 c. c.) was injected with a view of diminishing peristalsis and contraction of the dilated ureter. The calculi were expelled from the ureter after the fourth treatment. The calculi in the left ureter were not discovered until at operation, as they did not show in the X-ray plates taken. Both kidneys showed normal function. There was infection of the left pelvis.

In a second case, a right pyelotomy had been done twice, the second time for a recurring pelvic stone. At the second operation a catheter was passed from the pelvis to the bladder meeting with no obstruction. Some months after there were renal symptoms and a small calculus was found in the upper third of the right ureter. The urine which had cleared following the pyelotomy again showed evidence of infection. The kidney function was normal at all times. The Garceau catheter and papaverine (2 c. c.) were used twice and in ten days was followed by the expulsion of a small phosphatic calculus.

The following case is interesting: an X-ray diagnosis of renal calculus was made and a nephrotomy had been done for its removal. It was not found and the patient was referred to me "to find out what was wrong." On examination this patient showed infection of the right kidney and a stricture in the lower third of the right ureter about two and one-half inches from the bladder. No. 4 catheter was introduced with difficulty through the stricture, while a no. 6, the Garceau catheter, and the olives were arrested always at the same point during the course of several examinations. The function of both kidneys was normal. No X-ray or ureterogram was made, as a diagnosis of pyelitis and stricture of the ureter seemed to be the correct one, and as the patient improved and ceased to complain after a few dilatations followed by pelvic lavage. On passing a wax-tip catheter no scratch marks were obtained and the possibility of a calculus in the pelvis of the kidney or the ureter was completely discarded.

After dilating the ureter every five days for two months and after the ureter had been dilated until it took a no. 21 olive without difficulty, the urine having cleared, the patient was discharged and requested to return in 30 days for further observation. On his next visit he brought in a round calculus of the mulberry type, 3-8 of an inch in diameter, which he had passed a few days after his last visit.

There can be no doubt that at the time of the operation, under the effect of the anesthetic, the calculus passed into the dilated ureter and was shelved at the site of the stricture. A dilated ureter above the stricture and consequently the calculus not coming in contact with the wax-tip catheter, was responsible for the failure to obtain scratch marks. I feel certain that this calculus, both on account of its size and its consistency, would have given a shadow and its presence would have been proved had an X-ray been taken.

Still another case in which a picture of a small calculus impacted at the upper end of the lower third of the right ureter, proved by the arrest of the catheter at this point and the pyelo-

gram, which showed a very much enlarged pelvis, with infection, offers some interesting points. In this patient, who was 63 years old, and who had had a cataract extraction, there developed temperature, chills, and an acute iritis with exudate into the vitreous, co-incidentally with, or shortly after pain and tumefaction in the right upper quadrant of the abdomen. The eye condition was attributed to a focal infection and this patient was referred for the purpose of determining if the infection was in the kidney. Several urinalyses showed at times a urine which was fairly clear and again a urine with pus, some blood and colon bacillus. The patient was cystoscoped and catheterized—the left ureter being catheterized to the pelvis, while on the right side the catheters (4-6) could not be passed for more than a few inches. No urine could be obtained from the right side. The following day, the patient was rayed and pyelographed after having taken benzyl benzoate during the preceding twenty-four hours. At this time it was again found impossible to introduce catheters past the obstruction, although a small amount of infected urine was obtained. The Walther dilator was then used and after a bit of manipulation was passed. This was followed by the ready introduction of a no. 6 catheter., and the collection of urine which showed a pyo-pyelectasis. This was confirmed by the pyelogram. The patient's temperature fell, the tumefaction was reduced and nothing was done for 24 hours except to administer benzylets, morphine and atropine when necessary, and copious drinks of water. Within 48 hours the symptoms became aggravated and on ureteral catheterization it was found that the calculus was again impacted and that catheters could not be introduced. The Walther dilator was again used successfully and after thorough dilatation papaverine sulphate was injected into the ureter, after thorough drainage and washing with boracic acid solution. Forty-eight hours after this patient passed a small spiculed calculus and all symptoms subsided. The eye however had to be enucleated three weeks later.

The next case is unnusually interesting because of the multiple bilateral calculi present, their size, and the unusually high temperature which accompanied the blocking of the ureters. In this case I was called in to see a patient who was extremely septic, who was nauseated and was vomiting, whose pains were general over the abdomen and more marked in the right iliac fossa. There was pain radiating to the areas supplied by the genito-crural. There was considerable distension of the abdomen. The possibility of a retrocecal appendix with a retroperitoneal pelvic cellulitis was suggested by the clinical picture, but a history of having passed "sand" prompted an urological examination. An X-ray showed bilateral calculi in the lower third, almost at the intravesical portion of the ureter and of such size and shape that a positive diagnosis of calculus was to be confirmed. The urine was slightly cloudy and was found to contain pus and colon bacillus. On cystoscopy, the bladder showed a mild acute cystitis which might have accounted for the urinary frequency with urgency and tenesmus. On catheterization of the ureters the right catheter ment with obstruction in the intravesical portion of the ureter, while on the left, after a bit of manipulation, it passed an obstruction at the same level as on the right side. The urine from the left kidney was clear and showed only a few leucytes. A pyelogram was not attempted, as the patient's condition did not justify it. A successful attempt was made to pass the obstructions on both sides by using the Walther dilator. Papaverine was injected, after draining the pelves. The urine on the right side was purulent. There was some relief following this and the temperature subsided somewhat. Within 24 hours, however, all symptoms returned, to be followed by relief after the same treatment as given above. It was noticed, however, that the calculi had made no progress from their site at the previous examination. During the following 24 hours, the patient had repeated chills and the temperature rose until it reached 107. In spite of the extremely septic condition of this patient his total count did not exceed 13,000 whites. No functional test was done.

The patient's condition was such that it was deemed advisable to temporize no longer, to do an open operation if

necessary. However, a last attempt was made to remove the calculi from the ureters by endovesical means and was successful. The rongeur forceps were introduced into the right ureter and opened carefully. This was repeated several times and each time could be felt to be grating against the calculus. Finally with the forceps opened wide against the stone, the forceps was closed and it was felt that it had taken a bite on the calculus. Traction was made and the stone delivered into the bladder. This was followed by a free gush of purulent urine. The same procedure was undertaken on the left side with the same fortunate result.

The patient's general condition was such that no attempt was made to remove the calculi from the bladder, he was sent back to the room, given benzylets, to facilitate the passage of other smaller calculi present, and was put on forced fluids. During the folowing twenty-four hours the temperature dropped 9 degrees to 98 and remained normal. The chills abated. The calculi that had ben delivered into the bladder were passed per urethram the following morning. The urine rmainded cloudy. The white count, 48 hours after, was still up to 12,000, but there was no sign of sepsis or even of discomfort.

Subsequently, the ureters were catheterized, the pelves washed with silver nitrate 2 per cent. In the course of 15 days the patient was discharged, with a clear urine and a normal kidney function.

The following case is interesting only because a suprapubic cystotomy had been done for the removal of a vesical calculus and yet the persistent cystitis would not yield. This patient came to see me five wears after his operation and was found to be suffering from a chronic cystitis secondary to a pyelonephritis with calculus in the lower third of the left ureter. This patient had never had his ureters catheterized. Following repeated dilatations of the ureter with the Walther dilator, followed by the use of papaverine sulphate and the administration of benzyl benzoate in the internals, this patient, in about two months, passed a calculus, 3-4 of a inch long by 1-2 inch in diameter. As this calculus could not be passed from the bladder and endovesical attempts at removal by means of forceps were unsuccessful, a litholapaxy was done under spinal. His urinary symptoms have improved, but a mild pyelonephritis still persists.

The next two cases were interesting, as they demonstrated the value of the scissors and the forceps in dealing with calculi impacted at the ureteral orifice.

The first of these two cases was that of a male who had renal colic and in whom a diagnosis was made of calculus in the lower third of the right ureter. Following the injection of papaverine through a no. 6 catheter, this calculus, small in size and irregular in shape, finally became impacted at the ureteral orifice and was accompanied by violent renal colic. The patient was brought to the office and on cystoscopy the tip of a stone could be seen presenting at the right ureteral orifice. An attempt to grasp it with the forceps was unsuccessful and the ureter was incised by means of the scissors. The forceps were then introduced and the calculus readily grasped and delivered from the ureter and then from the bladder.

In the next case there are several points of interest, among others, a mistaken diagnosis due to incomplete examination because of the patient's general condition. I was called in consultation to see an emaciated and profundly septic woman who had renal colic, who was having frequent and prolonged chills and who running a temperature of 103. A nephrectomy had been conconsidered and information was desired as to the presence and function of the other kidney. On cystoscopy a calculus was seen impacted at the mouth of the right ureteral orifice. As the forceps could not be inserted through the meatus, it was incised. This liberated the calculus somewhat and it projected into the bladder where it was easily grasped and delivered. Thick ropy pus flowed from the right ureter. Then the ureter were catheterized and a functional test done. The right kidney showed no output of phthalein in half an hour, while the left kidney showed only 10 per cent in that time. From the nature of the pus coming from the right ureter, the absence of function, and the enlarged kidney, which was distinctly palpable, a diagnosis of calculous pyonephrosis was made. No X-rays were taken be-

cause of the fact that the patient had not been prepared and because the general condition would not permit of delay. The low function of the left kidney and the poor condition of patient led me to advise a nephrostomy, to be followed by secondary nephrectomy, if necessary, when the general condition had improved and the left kidney compensated. At operation, under gas, the kidney was opened from pole to pole, but no calculi or abscesses were found. To save time, the kidney was not sutured, but was simply packed with sterile gauze to prevent oozing and the wound closed with drainage. There was a rather slow but uneventful convalescence and the patient was sent home to regain her strength. The secondary nephrectomy has not been necessary, as this patient has fully recovered and her right kidney seems to be functioning properly.

There can be no doubt that this patient was suffering from a pyo-pyelectasis due to the impacted calculus and that the function of the kidney had been arrested by the pressure of the contents of this closed sac—that a kidney will come back and its function restored when the pressure is relieved, even after having been blocked for weeks, is, I believe, not an uncommon observation. I saw a case referred by Dr. Wm. Perkins and Dr. Leckert some years ago in which a patient had a mass in the abdomen which was diagnosed by me as a pyelectasis due to an obstruction at the uretero-pelvic junction; from this kidney no flow of urine could be obtained. A pyelogram was not successful, as no fluid could be made to enter the pelvis. It was after eight weeks of frequent catheterization that the obstruction was finally passed and was followed by a constant and prolonged flow of clear urine and a diminution of the mass. A functional test of the urine failed to show any trace of phthalein from that kidney. After dilatation with the Garceau catheter and the maintenance of the caliber of the ureter at this point—this kidney gradually improved in function and was finally perfectly normal. I have been seeing this patient once a year for ten years and he has had no recurrence of his symptoms, while his kidney has maintained itself normally.

A recent case, still under treatment, is that of a young man with an impacted stone in the lower third of the left ureter at the uretero-vesical junction. This stone which failed to show by X-ray, but which was diagnosed by the history of renal colic, by obstruction to the catheters at a fixed site in the ureter, and by obtaining scratch marks on a wax-tip and on a filiform, has so far resisted all attempts at dislodging. There is no infection, as yet, and as drainage from the left kidney is not being interfered with very seriously, although there is a slight uro-pyelectasis and some dilatation of the ureter, I expect to temporize. In this case, morphine, atropine, benzylets, papaverine by injection into the ureter, and the dilators of Walther and Bransford Lewis have been unsuccessful. I have even used a filiform whip such as we use for strictures of the urethra, but have not been able to introduce it for more than two millimeters past the stone. It was during a manipulation—rotation on its axis of the filiform—that the scratch marks were made on the filiform. This was verified by introducing another new filiform and again obtaining scratch marks.

In the only case, of the sixteen reported here, in which an ureterotomy had to be done, there are a number of points of interest, of which the most interesting is the fact that although the ureter was dilated to a caliber greater than the smallest diameter of the stone, it was impossible to bring it down. The stone was sometimes at a higher level following manipulations, but after two months of endovesical operative methods, the patient consented to be operated. This girl of 20 gave a history of pain in the right side for ten years. These pains were in the nature of a colic, but the persistent discomfort in the right iliac fossa led to the diagnosis of appendicitis. In the course of the routine examination at one of our clinics, pus was found in the urine and she was referred to the G. U. department. An X-ray showed a shadow in the lower third of the ureter. On catheterization, obstruction was met at a site corresponding to the shadow. The urine showed pus and colon bacillus. Test showed a markedly reduced function. An ureterogram showed the shadow to be in the line of the ureter. The ureter

above the stone was somewhat dilated. The pyelogram showed a pyelectasis.

In the course of treatment by dilatation with the Walther dilator and then with the Bransford Lewis dilator and on taking pictures to see whether the stone had made progress, we found that at times the calculus was at the level of the fifth lumbar vertebra, but that it never did come below the level of its original site at the sacrococygeal joint. Attempts were made to grasp it with the rongeur forceps, olive oil was injected into the ureter, papaverine was injected, but to no avail. Because of the infection, the damage to the kidney, as evidenced by the low function, the recurrent attacks of renal colic, and because of the constant pain, operation was advised and accepted.

The ureter was readily reached thru a Gibson incision, incised in its long axis about two inches proximal to the calculus, the calculus was milked up to the incision and delivered. A Garceau catheter was readily passed to the bladder. No sutures were used to close the wound in the ureter. A drain was inserted to the ureter, the muscles approximated and the skin closed, up to the drain, with linen. The patient made an uneventful recovery and was discharged on the fifteenth day.

The urine has cleared, but the functional capacity has not reached the normal. All pain and discomfort have vanished and the patient had gained ten pounds in the four months following her operation.

I am at a loss to give any reason for this inability to pass the calculus and for its invariable settling at the same site, unless it be that there was present some sacculation of the ureter, just above a large calibre stricture due to a fibrosis of the ureter wall, into which the calculus was invariably directed. No ureterogram was made subsequent to the operation with a view of determining the presence of such a condition, although this has been contemplated. An interesting point in this case is the fact that at times this stone had apparently rotated on its axis and presented a different surface.

About five months ago a woman of forty was referred to me for the removal of a rather large calculus in the right ureter about three inches from the bladder. She had suffered for five years and had had an appendectomy done without relief of symptoms. Her pain was not constant, but every now and then was in the nature of a renal colic. The urine was normal. That the shadow in the right side was due to a calculus was proved by the wax-tip catheter, by palpating the stone per vaginam while a dilator was in the ureter, and by obtaining bits of the calculus by means of the rongeur forceps. The kidneys at the time that the patient presented herself, were normal.

The various dilators, the rongeur forceps, intra-ureteral injections of oil, papaverine, the introduction of several catheters for dilation, after using an injection of 5 per cent novocaine into the ureter, an attempt to dislodge the calculus by intra-vaginal manipulations while the dilators or the forceps were in the ureter in contact with the stone, were of no avail. Operation was offered, but rejected, as the patient was rather comfortable in spite of her many experiences with the operative cystoscope.

The two points that stand out preeminently in this case are, first, the inability to budge this calculus in spite of its accessability and of the extensive dilatation to which the ureter was subjected; and secondly, the ability of the ureter to be subjected to considerable trauma with but little discomfort to the patient. It was not until after the eleventh dilatation—the last two having been done with the Bransford Lewis dilator—that the ureter, both above and below the stone, could be felt to be markedly thickened (per vaginam) and tender on pressure. At no time was any evidence of infection discernable in the urine following instrumentation. I am not prepared to say, however, that no permanent damage, with possible hastening of ulceration and ultimate perforation of the ureter and retroperitoneal infection, will not ensue from the probably too frequent and too enthusiastic treatments given in this case.

No routine treatment, with the use of any special method, has been followed in these cases, and I believe that this is as it should be. The series is not large enough to enable me to advocate any special instrument to be used in all cases needing dilatation, and even if it were,

it is my opinion that the conditions presenting in a given case would determine the course to be followed and the technique to be employed in that particular case.

There are to be considered in temporizing, in the hope that the calculus will be spontaneously passed, the question of size and location, the presence of anomalies of the ureter, such as strictures, tolerance to cystoscopic manipulations, and most important, the presence of infection and the possibility of traumatic anuria when the calculi are bilateral, and reflex when unilateral. These are all conditions that can be and should be determined by cystoscopy and catheterization of the ureter, in conjunction with whatever other means of diagnosis necessary for an accurate diagnosis.

Should the calculus be of such size as to justify the opinion that it can be spontaneously expelled and if there are no anatomical or pathological constrictions that will interfere with its passage; if there is no infection and the calculi are unilateral, then there is no reason for haste and undue instrumentation. Of the sixteen cases mentioned here, five or 33 per cent, passed the calculi spontaneously unless the catheterization of the ureters which was done for diagnosis in four of the five cases was responsible, in part at least, for their expulsion.

In connection with the cessation of renal colic or of renal symptoms, let me take occasion to mention here a recommendation made, I have forgotten by whom, that a cystoscopy be done, with a view to prophylaxis against vesical calculi forming with a passed ureteral calculus as a nucleus. I believe that this should be done even though a calculus be expelled, as there may have been multiple calculi present, of which, only one was not retained in the bladder. This is especially to be recommended in the case of patients who have some obstruction, such as enlargement of the prostate. It may be well to remember that in the presence of a diverticulum a small intravesical stone may find its way through the neck and give rise to conditions requiring much more extensive surgery than the mere introduction of the operative cystoscope and the forceps. In my own practice, I have had a number of cases of vesical calculi which gave unmistakable histories of ureteral calculus with renal colic. One of the cases cited above, in which a suprapubic lithotomy had been done, although still suffering from occasional renal colic and renal infection, gave a clean-cut history of renal colic for years before his lithotomy.

Operative measures for calculi that have failed to pass spontaneously or for conditions complicating, which demand prompt action, fall into two types—the endovesical, made possible by the devising of special instruments to be used in conjunction with the operative cystoscope and the cutting method, or ureterotomy.

The former can be used in the majority of cases and certainly should be given adequate trial before resorting to ureterotomy with its consequent mortality due to either "hemorrhage, shock, sepsis and peritonitis", not to mention dilatation of the stomach from the prolonged administration of ether. Such post-operative complications as thrombosis, destruction of the ureter, pulmonary embolus, and fistula should be thought of.

I mention these complications with full knowledge of the low mortality reported by Judd in a series of 400 uretero-lithotomies. But as many ureterolithotomies are performed by men less skilled. and with fewer facilities for accurate pre-operative diagnosis and estimation of complicating conditions, it is advisable that the less serious endovesical methods be given a thorough trial. Just how long we are justified in attempting to remove ureteral calculi by endovesical means, I think must be left to the individual judgment of the surgeon who must form an opinion from the available data obtained after thorough examination.

Of the various endoscopic methods, the simplest, and possibly the safest, is the introduction of the ureteral catheter with a view of dislodging the calculus and favoring its descent. This may be accompanied by injection into the ureter of papaverine to paralyze the ureter and prevent further impaction, due to spasm of the muscles of the ureter. This paralyzing effect has, besides, the advantage of permitting drainage past the calculus and lessens the damage to

the kidney which would result from the back pressure and the infection present.

The cases here are so few that I would hesitate to draw conclusions as to the value of papaverine in ureteral calculus, but my experience with this drug in conjunction with catheterization for diagnosis, including pyelograms and treatment, has led me to believe that it is of distinct value in preventing renal colic after intra-ureteral instrumentation. I found that in inflammatory conditions due to infection, the cases having renal colic following catheterization and lavage, for either acute or subacute conditions, were not infrequent. I assumed that was due to an increased peristalsis with spasm and consequent retention, as a result of trauma to the inflamed mucosa, and I began the use of papaverine as prophylaxis against renal colic. The results were very gratifying. I am led to believe from this experience that the effect of papaverine on the ureter is positive and that it can be used to advantage in the attempt to effect the descent of calculi.

The use of oil to lubricate the ureter and thereby facilitate the descent of the calculus has always appeared to me to be a procedure based on theory and of no practical value. I cannot see how the ureter could be lubricated unless it were a non-contractile tube through which a calculus were meeting with obstruction due to friction. Cases of impaction and complete obstruction, barring those in which the lumen is constricted by anatomical narrowing or by pathological changes, are due, to my mind, to a contraction of the ureter about the body it is trying to expel. If oil were to be efficient it would have to have an antispasmodic effect on the musculature of the ureter, and as far as I know, no one has ever claimed that its action is such.

Of the various methods of dilating the ureter, I have had experience with the Garceau catheter, the Walther dilator, the dilator of Bransford Lewis, and the introduction of more than one catheter into the ureter following its injection with novocaine. With the probang of Lewis and the perforated artificial cork of Lespinasse I have had no experience. The introduction of the probang presupposes the ability to get beyond the calculus, a feat frequently difficult. The possibility of rupture or laceration of the ureter with consequent extravasation of septic urine into the peritoneal cavity or into the retroperitoneal tissue seems to me to be a real danger and has been responsible for my not attempting the method where others have failed. I would prefer the open method as more scientific, more surgical and less fraught with dangers which are beyond the control of the surgeon. With the Lespinasse perforated artificial cork I have had no experience, but from a theoretical standpoint I would consider its application as limited, and in cases of infection, not without danger of damage to the kidney by blocking of the ureter.

Of the other methods of dilatation, I have found the method advocated by Crowell, I believe, and used successfully by Buerger previous to April 1921, of introducing more than one catheter into the ureter, to be difficult at times and impossible at others. When the method can be used it certainly has the advantage of draining the ureter and pelvis above the calculus and of stimulating the kidney to secretion in case of anuria, whether reflex or due to block.

In cases in which dilatation is indicated, I have found Walther's dilator invaluable as a preliminary to the use of the other types with which greater dilatation can be accomplished. It seems to me that the insinuation of the filiform between the wall of the ureter and the calculus with the subsequent rubbing by the uneven flexible metallic stem favors the freeing of the calculus from its point of impaction. It is an instrument which can be used to advantage when the ordinary catheter has failed, and, as far as my experience goes, one that is not apt to be followed by undue trauma and injury to the ureter.

The use of the rongeur forceps for grasping of calculi in the lower part of the ureter has served admirably in some of the cases reported above and I shall not dilate further on its advantages. For calculi incarcerated at the meatus, the scissors can be used for ureteral meatotomy. In the event of the impossibility of the blade's being introduced, it would be well to remember that the high frequency spark, as suggested by Furniss, has given excellent results.

In two of my cases, in spite of the use of those cystoscopic manipulations usually advocated, there was failure to cause expulsion of the calculus. In such cases and when urgency demands it, there should be no hesitation in doing an ureterotomy.

The incision and the technique will depend largely upon the site of the calculus. In the one case, the position of the stone suggested an incision about a half inch above and parallel to Poupart's ligament and then turning up towards the anterior superior spine of the crest of the ilium. This gave a splendid exposure and after identifying the bifurcation of the iliac vessels the ureter was readily found adhering to the posterior leaf of the reflected peritoneum.

It is hardly necessary to remind you, in order to reduce not only mortality, but also morbidity, which might result from complications due to interference with its blood supply, that it is essential that the ureter be handled gently and that extensive dissection or separation from its peritoneal attachment is to be avoided.

In the other case, should the consent of the patient be obtained, I shall do a vaginal ureterotomy, combining it if necessary with intra-abdominal manipulations to facilitate its removal.

Since the writing of these notes, the patient who had a diagnosis of calculus at the uretero-vesical junction made by the scratch marks on the filiform whip, has passed two small, rough, irregular phosphatic calculi.

636 Common Street.

DISCUSSION.

Dr. A. C. Eustis: I have my own ideas, but I may be wrong. I am under the impression that there is very little if any danger in catheterization of the ureters. Is it not more dangerous to temporize than it is to go right in and make a definite diagnosis? Are you likely to get suppression or other dangerous symptoms following catheterization for diagnostic purposes?

Dr. H. W. E. Walther: I just want to speak of two points on the subject which Dr. Kahle has so thoroughly covered; there is not much more to say, but in the discussion of ureteral stones one must ever bear in mind the fact that the X-ray is not infallible, and that in a certain percentage of cases the diagnosis is only going to be suspected by accurate studies of the urine and then confirmed with the ureteral catheter, plain or wax-tipped; then, in the treatment of these conditions, I think many of our medical confreres misconstrue our present way of presenting papers like this, due to the danger at least, that some one gets the impression that we are trying to get all the stones out by cystoscopic means, and as Dr. Kahle's report shows, that is not the case, but if the vast majority can, (and they can be) removed by such means, we should give the patient the benefit of these so-called non-operative procedures. Particularly is this so in patients who have gone to the operating table for the removal of an appendix, right ovary and right tube when the pain was due to right ureteral calculi.

I wish to thank Dr. Kahle for the kind words he said about my dilator. It is rare indeed for a man to be praised in his home town, but my little apparatus has been in use for five years and I have had the pleasure of seeing it used in the largest clinics in this country. It is nothing but a flexible metal shaft with an 11 F. olive. I have had many of my friends tell me that with it they were able to get by obstructions in the ureter, though they could not do so with other instruments.

Dr. W. A. Reed: I hesitate in getting up with an experience of only about six cases of stone to recount. Four have had the stones removed by means of the cystoscope and its various appliances, but two have not yielded to those procedures. Both of these cases have stones in the same position, about 11-2 cm. from the orifice of the ureter. Both cases were cystoscoped repeatedly over a period of five or six months; one has intermittent pain in the kidney on that side and the other is free of symptoms. Both these stones are impacted very tight, and the only thing I can manage to get up at all is a Phillips filiform attached to a Walther dilator. How long can one safely wait to operate in cases of this kind? It seems rather difficult to suggest an operation which is as extensive as an open operation is, for stones that are so close to the ureteral meatus.

Dr. Kahle: I want to thank you gentlemen for your favorable criticism. I think there can be no doubt that Dr. Jamison's idea is to be commended, and that calculi should be sent to the laboratory for chemical examination.

In answer to Dr. Eustis' question as to the risks of catheterization, I believe that the reason for the prevailing opinion, that it is not without danger, is due to the fact that very often after catheterization there is a flare-up of symptoms in cases of a sub-acute or a chronic pyelitis or of a pyelonephritis. I believe, however, that where there is indication of the presence of a calculus, there should be no hesitancy in making a diagnosis by means of the ureteral catheter. The expulsion of a calculus can often be brought about by the mere introduction of the catheters. I believe we should catheterize these cases for diagnosis, to determine if there is functional impairment of the kidney, for drainage of the pelvis of the kidney and for the purpose of liberating an impacted calculus.

As far as Dr. Reed's question is concerned it is a little hard to answer. I should temporize if there is no infection. I would not hesitate to temporize indefinitely. I believe that when the drainage is good, no serious harm results from the presence of a calculus.

No matter how large the stone was, if the drainage were good and if the patient were not suffering from pain or discomfort, I would check up with the X-ray from time to time, to ascertain the position and rate of growth; catheterize to make sure there is no obstruction to the expulsion of the calculus, or no dilatation of the pelvis or calices. In the absence of infection, back pressure or dilatation, which might impair the function of the kidney, I would temporize indefinitely. We must remember that there is not infrequently some degree of ulceration of the ureter at the site of impaction and that with infection, which would aggravate the condition, there is a possibility of the extrusion of of the calculus into the peritoneal cavity, or into the retroperitoneal tissues with consequent infection.

THE CHARITY HOSPITAL OF LOUISIANA.

By ALBERT E. FOSSIER, A. M., M. D.

(Continued from last issue).

Desolation, poverty and ruin, the heritage of war, grasped in their ruthless clutches the whole Southland, nor did their dismal offspring, want and privation, spare even institutions of benevolence and charity.

The days of reconstruction were eventless in the history of the Charity Hospital, except that they leave record of insufficient resources, and buildings fast falling into decay. In his report for the year 1864, William H. Hunt, then Vice-President of the Board of Administrators admonished that to maintain the institution during the coming year, to enable it to dispense its incalculable blessings, to preserve its valuable buildings from decay, and to render them fit for the purpose for which they were originally intended, required an appropriation from the State of at least $100,000.00. In response to his appeal the General Assembly appropriated the sum of $40,000.00. The chief revenues of the institution after the war were derived from an appropriation from United States Government, and also from a tax levied on lotteries. In 1867 the sum of $67,523.00 was paid by the Government for board, and for medical and surgical treatment for the United States seamen. The chaotic conditions of finances resulting from the large amount of worthless confederate money then afloat, financially embarassed the Hospital; this valueless paper was used to pay the taxes and licenses due the institution. The Board of Administrators was forced to appeal to the Legislature for relief and petitioned them to draft laws compelling payments to the Hospital to be made in United States currency. Another unsatisfactory source of revenue was that drawn from the annual benefits given by local places of amusement. Very frequently these benefit performances resulted in a shortage rather than a surplus. For instance, in 1865 the benefit performance given by the St. Charles Theatre resulted in a deficit of $900.00. For tunately the management magnanimously bore the loss. In 1866, only $3.85 was realized from the same theatre, and in 1867 the proceeds from the same source were nil. Taxes from gambling always furnished ample returns to the Hospital, and in the year 1867 they yielded the sum of $33,035.48.

Hon. Michael Hahn, member of the Board of Administrators, offered the following resolution which passed unanimously at the meeting of the Board on the seventh of September, 1868: "Resolved, that in admitting sick persons to the benefits of this Hospital no distinction be founded on race, color, or previous condition." This was recorded by the Carpet baggers Administration as being among the most important proceedings of the Board of Administrators.

The lack of an asylum or a place of refuge for the indigent and the incurables was greatly deplored by the Board in many of their general reports following the war. This condition was especially emphasized in the annual report of 1870. "It is more than to be regretted that the noble purposes of relieving the sick and healing the wounded, and of advancing the science of medicine and surgery, for which this institution has acquired a creditable and, we might say, enviable reputation, should be intruded upon and overrun by a species of idlers who simply want board and lodging and only* pretend to need medical aid. Under no circumstances can a hospital, thus transformed into a lodging house for idlers and even drunkards, be the proper place for the treatment of patients suffering from diseases and to whom rest and quiet are absolutely essential for recovery." The report mentions that the Touro Alms House was in course of construction before the war, and bewails its site in the Third District on the river

*The author is not responsible for phraseology of quotations, as they are taken verbatim from text.

bank, in a thickly populated part of the city. It further comments: "Providentially for the class it was intended to benefit, this benevolent prison was destroyed by fire."

The report of James Graham, Vice-President of the Board of Administrators for the year 1870, throws light upon the condition of the Hospital of that time. He demanded that a complete modification of the system of conducting the institution be adopted, so as to secure a more regular and better medical attendance, and bewails the fact that by reason of the large number of paupers flocking to the Hospital for relief because of the lack of suitable asylum for their proper care, its tendency as a hospital was trending downwards, approaching the status of a cheap boarding house, from which groove it must be elevated to its proper place. He also mentions: "The number of inmates really requiring medical treatment are at present considerably in the minority, and as a consequence are frequently neglected, the time of nurses, attendants and physicians being occupied in satisfying the clamors of those who are not sick, and who are in the majority, and who from fear of being discharged, feign sickness in proportion to the interest manifested in them. The great evil of this to the professional attendants is that diseases are no longer studied, the time given to the Hospital being occupied entirely in prescribing medicine. In fact, it can be safely said that for the past few years the surgeons and physicians attending the hospital have done little else." The following criticism is also registered: "In this connection it is right to state that the officers of the Hospital have faithfully and intelligently performed their respective duties, although not satisfactorily to themselves, or to the institution, and that a change of system will have to be made by the administration in order to effect an improvement." The only bright spot and redeeming feature in this condemnatory report is the sincere appreciation by the Board of the services of the Sisters of Charity: "In conclusion, the Administrators feel it a duty to express their appreciation of the sacrifices on behalf of the Sisters of Charity to the sick and suffering poor, who have been received and cared for in the Hospital. Their department has been managed with the economy, regularity, system and exactness of detail which has alone amidst the changes of administration, preserved the character and reputation of the Institution."

The House Surgeon at that time was Dr. A. W. Smyth, assisted by Dr. J. A. Root. Dr. Smyth acted in that capacity from 1863 to 1877, when he was succeeded by Dr. George K. Pratt. The crime wave, a gruesome appendage of war, and brutal accessory to the reconstruction period, persisted for many years after the surrender of Lee. This is attested to even in the year 1874 by the large number of stabs, cuts and shot wounds mostly the result of personal rencontres treated in the Hospital. There is recorded in the reports of that year the murder of an Administrator of the Charity Hospital: "To fill up the measure of outrages, the last victim brought to the Hospital was Fabius McK. Dunn, a man of irreproachable character, and an administrator of this Institution. He fell pierced by the bullet of an assassin while quietly walking along the street last night, and expired soon after reaching the Hospital. As in other cases, the murderer escaped detention." The following report of the murder is taken from the New Orleans Republican: "The deceased was walking down Canal street, in company with Mr. Jenkins, the latter being a foot or two in advance. When crossing the railroad track on Basin street, they encountered four men, one of whom, passing Mr. Jenkins, fired a bullet into the heart of Mr. Dunn, who exclaimed: 'I am shot!' and after walking a dozen yards fell on the sidewalk. He was conveyed to the Charity Hospital where he shortly expired."

This paragraph taken from the report for the year 1876, is a memorial of the exceedingly low cost of hospitalization of that time as compared with the high rate of today: "We have the gratification of being able to state that we have provided for sick and well, and on the average of six hundred and fifty people per day throughout the year. Calculated at a cost of sixty cents per day, which is the allowance the city government makes for the board only of prisoners in the jail house or calaboose, the expense sums up 650 inmates at 60 cents per day for 365 days, $142,-350.00; while our expenses all told, including $19,468.62, salaries of officers

and back dues of employes amount to only $81.021,26." The Hospital was administered on the incredibly small sum of thirty-five cents per patient per day.

No less surprising is the following incredible mention of the usurious custom then in vogue: "The embarrassments and the accumulation of debts with which the institution has to contend have arisen from the fact of having to pay during the past five years over a quarter of a million dollars to the usurers to whom we are forced to apply for money in exchange for the warrants issued for the support of the Hospital, it having been impossible to us for years past to collect anything but trifling sums of money for them from the Treasury direct."

The year 1879 inaugurated many important changes and improvements. The following taken from the report of the Committee of Improvements from the Board of Administrators gives a good idea as to the status of that Institution pevious to the 80's: "On first entering upon the discharge of our duties, the desolation and want everywhere apparent was appalling. Beds and bedding, provisions, drugs and necessaries for the patients were sadly deficient, or totally exhausted, the beds not having a change of sheeting, and scarcely any winter covering, the supply of drugs and provisions being totally exhausted, while the credit of the Hospital was gone, and could not be used for the purchase of a pound of flour or salt. The buildings, too, were found in an almost dilapidated condition, the floors, walls and roofs being unsafe. In places, the walls and roofing had already succumbed to the neglect of repairs; other portions were threatening and in danger of falling in; the galleries of some of the buildings were fast receding from the walls; the stairs and landings were nearly impassable, and the supply of water (that most necessary element in a hospital) was very limited. Under such unfortunate conditions commenced our duties Finding that it would be impossible to enter upon general repairs, until we had taken measures to prevent the falling of walls and galleries, we set at once at work to render these secure by clamps and bolts, and having succeeded in so doing, proceeded in the work of thoroughly repairing and putting in order the several buildings. In several instances we were compelled to renew portions of the foundations of brick buildings before we could properly carry on the work of repairing them. Without specifying in detail all that has been done, we give the major part of the work of repairs accomplished, as follows: We have had hot and cold water distributed throughout all the wards. A new boiler has been put up, and the old one has been repaired and put in thorough working order, and new foundations put under all the machinery. Two new brick water closets have been built, (the old ones, so offensive and detrimental to the general health of the hospital having been demolished). One new lying-in division has been built, and the building set apart as the women's department thoroughly repaired; new galleries (open and closed) put up, and the whole building thoroughly ventilated between the floors and ceiling, making a vast improvement in its sanitary conditions; new venetian blinds have been put to all the windows throughout the Hospital. Steam radiators put in all women's wards. The roofs throughout have been all repaired. A new dining-room for female employees erected, and three new sheds and a brick store room built, seventeen new cisterns put up, capable of containing two hundred and forty thousand gallons of water. Water mains have been laid and forty-eight hydrants established in the grounds. The grounds have been thoroughly graded and relaid affording perfect drainage. The main buildings thoroughly repainted within and without, and the other buildings more than once. Two hundred new black walnut bedsteads have replaced the number of broken and worn out old ones. New beds and bedding, an ample supply furnished; an elevator has been put in the main building, and the Hospital connected by telephone with the telephonic wires throughout the city. Besides these, the Surgical and Microscopic Departments have been fitted with new apparatus and instruments, and we can now say that in all its departments the Charity Hospital is today better appointed and more thoroughly fitted and furnished than at any other time in its history."

In 1880, the Board decided that ap-

plicants for interns were to be appointed only after one year's study of medicine, and after a careful competitive examination proved them worthy of the position.

In that same year, Dr. A. W. DeRoaldes was made House Surgeon. He recommended the replacing of wooden beds by those of iron because the latter occupied less space and the former were harbors for contagious diseases, and greatly impaired the comfort of the patients. He strongly urged the institution of a special department for children and deplored that it was "a bitter fact that we are utterly unable to receive them or relieve their sufferings." He bespoke a special ward for the treatment of diseases of women and two additional colored wards; also, an electrical therapeutic room and a hydropathic department. And bweailed deficiency of improved and modern surgical appliances which were a vital need and which would have greatly facilitated their efforts in treatment. He alluded to the fact that the Hospital was misused as an alms house and claims that there were on that day 110 inmates out of 534 who were utterly incurable, and who should be properly placed in asylums and not allowed to infringe on the comfort of those more acutely in need, He also complains of the overcrowded condition of the Institution which was some times compelled to take care of the overflow of patients by placing pallets on the floor. The Hospital Medical Library was established during that administration. In his report for the following year Dr. DeRoaldes strongly recommended the erection of an additional building to obviate the crowded condition of the wards. He also insisted thusly: "A system of paid and responsible nurses is very much needed in the male wards; the establishing of such a corps would insure much better attention to the patients than the present system of unpaid nurses."

The following recommendation is interesting, especially considering the unhygienic condition existing in the City forty years ago: "Our privies which permit water and fecal matter to run from the vaults into the street gutters are deterimental to public health, and we have been called by the city authorities and Board of Health to abate the abominable nuisance; this can only be done as in the case of large hotels and the customhouse, by laying a pipe to the river with the necessary force pumps, etc.

One of his important recommendations was to improve ventilation in the main building, by employing and increasing the size and number of windows. Dr. DeRoaldes in his two years of service, instituted and recommended some of the epochal reforms in the Institution he so faithfully served. Untiring and fearless in accomplishing his duty, indifferent to personal consequences resulting from the changes which he advocated as beneficial to the Hospital, his term of office terminated abruptly by the machination of enemies. Shortsightedness and lack of political courage on the part of the Governor of the State and the Board of Administrators of the Hospital deprived that Institution of the vision, knowledge and executive ability of that great House Surgeon.

Many of the transitions resulting in the present modern Hospital had their beginning during the Hoouse Surgeonship of Dr. A. B. Miles. His name stands preeminently among the House Surgeons of the Charity Hospital. It has been asserted that during his tenure of office the most noteworthy advances and discoveries took place in the evolution of modern medicine, and that he only drifted with the current of medical progress; many are reluctant to admit that his great achievements were more than promptings of the urgency of the times, and the claim has been advanced that he executed many of the reforms suggested by previous administrations, andthat his success was solely the result of his length of service with the hospital. However, it must be allowed that he added luster to his name by his accomplishments. His success can be, in a great degree attributed to his more than usual tact, his tenacity of purpose, and to his convincing personality.

His annual reports abound with suggestions for the improvement of the Hospital and for the comfort of the patients. The justice of his recommendations, his logical conclusions, the clarity of his style, his repeated forcible demands for the modernization of that great Institution, gained for him the confidence, respect and admiration of the Board of Administrators. He served the Hospital as Resident Student from

1873 to 1875, as Assistant House Surgeon from 1877 to 1881, and as House Surgeon from 1882 to the day of his death, August 5th, 1894.

In his first report are the following recommendations: The organization of the outdoor clinics for the poor. The erection of a House for Women and Children for which he advanced the following argument: "For many reasons our little patients (boys and girls and children) should be to themselves. The opening of a boy's ward is the initiative step in this direction. Girls and children, under five years of age, are now scattered over the female department to fill up the clinics and corners. A separate department for children is a pressing necessity in the Hospital."

The advancement of medical work in the Hospital, improvement of the operating room to facilitate the practice of surgery. In this connection it may not be amiss to mention that in that year (1883) for the first time, the operating room was supplied with clear hot and cold water, ready to hand.

The reorganization of the Outdoor Clinics resulted in a great increase of cases. In 1882, 6,000 visiting patients were treated, and increased to 8,769 in 1883. That year the total number of patients admitted was 8,820 of which 1,013 died—a mortality of 11 per cent. This was the smallest death rate in fifteen years. It is a matter of notice that there were recorded 2,972 cases of malarial fever, more than one third of the total number of admissions, and in 1884, there were 3,626 cases of malarial diseases, 1,009 from the country and 1,261 from the city—45 per cent of the inmates treated. There were 95 deaths from that disease —a death rate of 2.6 per cent—or 9 per cent from all causes.

The following recommendation made by Dr. Thomas Layton, vice president of the Board of Administrators, in his report for the year 1884, is worthy of mention and is especially interesting in view of the recent discussion on fire prevention in the Hospital: "While touching on the subject of improvements, the recent heart rending accounts of loss of life from fire in a public institution, in another section of the country, appear to me to afford matter for serious reflection on the part of everyone connected with the administration of the Hospital. In the event of a conflagration occuring beneath its roof, are we fully prepared to meet the emergency? It will be answered that our water supply is practically unlimited; that we are in close proximity to one of the companies of our devoted fire department; that our hose and its apparatus are always ready for service; that we have large hallways and staircases, and that no danger need be apprehended. Still it should be remembered that these very halls and stairs act as flues during a fire, and that a large portion of the inmates of a hospital are incapable of assisting themselves. I therefore very earnestly recommend this subject to the consideration of Your Excellency and of my colleagues of the Board of Administrators."

Two very important additions were made to the Hospittal group of buildings, to wit: the present white women's building in the rear of the main edifice, and the present morgue and pathological laboratory. The descriptions of these buildings is taken from the hospital report of year 1884. "The Annex or New Extension, originally designed on plans submitted by Dr. A. B. Miles, House Surgeon, and built under the supervision of W. A. Freret, Esq., architect, in accordance with his architectural drawings, is a comfortable constructed two story and attic brick edifice, with large, well lighted and wide corridors; wards ventilated according to modern hospital requirements (1000 and more cubic feet for each bed), linen rooms, mess rooms, dining room for convalescents, water closets, etc., and heat throughout by improved steam radiators. The building closely joins and forms a continuation of the old Female Department, which latter has been raised to the floor level of the annex by an elevation of two feet. The entire foundation is elevated some two feet and its ground thoroughly laid with the Fletcher sanitary flooring, thus ensuring preservation and dryness. The capacity of the new house is eighty-three beds for women and twenty- four cribs for children. It has been completely and newly furnished at a moderate expense. In connection with its furnishing it is but grateful to recognize the fact that some of the ladies of our city bestowed upon it twenty-four cribs for infants with their full outfit. By the considerate kindness of his Excellency

Gov. S. D. McEnery, we have been enabled to place in a tower surmounting the annex and especially constructed for the purpose, the famous Fournier Clock, lately used at the St. Louis Hotel State House. With its two, well marked and at night illuminated, dials, we are dispensing standard time to our inmates as well as to the neighborhood. The new house was open for the reception of patients on August 25th, 1884.

The new Dead House, opened September 1st, 1884, is located some eight feet interiorly from the wall on Locust Street, on the most unobserved portion of the Hospital grounds. It is a two story brick structure, containing on the ground floor, the appointments of the Dead House proper—paved and wainscoted with slate stone—with a suite of rooms from which the dead who are claimed may be buried by relatives and friends; on the second floor, the Pathological Laboratory and Museum of Pathology, two large, well lighted rooms, especially designed for the purpose."

Annexed to the Female Eye ward (No. 40) was the Eye and Ear Operating Room. It was constructed with a view to light, with large French plate glass windows on three sides. This was soon absorbed by the female department in enlarging its ward space.

The Hospital then contained 700 beds and cribs, distributed in 52 wards.

Dr. Miles bewailed the old way of conveying the sick and injured to the hospital in City Wagons and Vehicles of all description, which has occasioned much distress to the patients, and resulted to their detriment in their after treatment. He was commissioned by the Board to purchase ambulances for the Hospital, and in September 1884, he visited Eastern cities to inspect ambulance service in connection with large institutions. On February 2nd, 1885, this service was inaugurated with two ambulances. The success of this new department was immediate, and the following reported: "Lives have been preserved by the prompt aid rendered on the spot in cases of poisoning and surgical accident. In the ambulance report, observe the preponderance of surgical cases. In my judgment, the usefulness of the service and the high appreciation in which it is held as a public charity, can best be maintained by continuing the present plan of relief, under the rules and regulations first adopted. This should remain an emergency service, to render medical aid on the spot and transfer to the Hospital only the more seriously ill and injured." In 1886, the present Ambulance House was erected. It was originally a two-story building: later another floor was added: shortly afterwards the increased service demanded the addition of a third ambulance. The second story of the Ambulance House was divided into quarters for students and drivers. Until then the first year students were housed in the main hospital building. Again, history repeats itself. The present overcrowded quarters for the internes and the lack of housing facilities for nurses and doctors is as acute as in the early eighteen eighties. This deficiency is reported for the year 1886, thusly: "This matter (the location of first year students in the main Hospital building) has been a matter of solicitude to the Board, who feared the deleterious effects of such insanitary conditions upon the health of the inmates of these rooms but were powerless, until quite lately, to apply the proper remedy." In the last report (1882) we find: "The great needs of the Hospital today are quarters for the internes and additional quarters for the nurses."

Dr. Miles reports: "It bcomes my duty to report irregular attendance of the Visiting Staff, which is inconsistent with the welfare of the patients as well as preservation of system in the medical service. I respectfully recommend that the membership of the staff be limited to a number capable of doing the work and willing to attend the wards regularly. A small staff of punctual members would be preferable, and a limited membership would enhance the honor of election. A daily register of the attendance of each member of the staff should be kept, as is done in many well-ordered institutions, and submitted with applications for re-election, to guide you in bestowing honors where they have been deserved." A register was placed near the main entrance, in which is inscribed the signatures of many of the members of the Visiting Staff of today. This dereliction on the part of some of the Visiting Staff was corrected, for the following year, the names of fifteen visiting physicians and

surgeons out of a total of thirty-five were absent from the visiting list of physicians.

An apercu of the management of the Outdoor Clinical Department of that period is had from this report of the House Surgeon for the year 1886: "The record of the Outdoor Department, herewith submitted, shows the treatment of 13,336 cases. The benefits of this Department, intended for those only who are needy and worthy, are too frequently sought by people who have means to secure medical attendance elsewhere. In the Outdoor Clinics are treated the milder types of disease, and also many patients more seriously ill, who prefer to live at home and come at intervals for consultation and surgical dressing. This plan proved an economy to the Hospital. At present, the Outdoor patients are treated in the Hospital Buildings, and many of them in the presence of the inmates. However orderly the management, the daily visits of so many patients necessarily disturb the inmates." Again, Dr. Miles strenuously urges the urgent need of a separate building to house the Outdoor Clinics, in which necessary treatment may be given without disturbing the inmates of the Hospital.

At the close of the year 1886, a special department for the treatment of diseases of the skin was established. Dr. H. W. Blanc was appointed Visiting Dermatologist.

That year, after dividing expenses of all kinds, including living, maintenance, improvements and repairs, etc., among the individuals living within that institution, the results showed the incredibly small sum of forty cents per diem per head.

The following year a Dental Clinic was established under the direction of Dr. A. G. Friedrichs. As all extraction and other emergency dental work had been performed by physicians, the addition of a dentist to the Visiting Staff was a great step forward in the progress of the Hospital. In this connection, Dr. Miles stated: " and many who formerly suffered at our willing but unskillful hands, now receive proper treatment."

The main recommendation in the yearly report of 1887 is the abolishment of the restriction by law of the appointment of resident students other than Louisianians, and the institution of their selection by means of competitive examination.

Dr. Miles, in his urgent appeal to the Legislature to repeal that law, makes the following plea: "Under this system of restriction, th honor which usually attached to residents at the Hospital has been so much diminished that the Louisiana students, who are themselves the beneficiaries, prefer to enter into open competition with their classmates. The present law secures the appointment of a few students in advance of their preparation for the practical duties which devolve upon them, when by the system of open competition the same students would probably enter a year or two later, and then be better prepared to render competent service, and profit more by the practical advantages offered. My observation is that most of the Louisiana students who set their hearts and heads on entering the Hospital in open competition, have usually succeeded. The law is equally unjust to a few students of this State in hurrying them into responsible positions for which they are ill prepared, and to the patients whose lives are committed to our keeping. The benefits offered the students of Louisiana do not in the measure contemplated, redound to the advantage of the people of the State. The field of medicine is not divided by State lines, and the graduates of the State University scatter over this Southern and Southwestern country wherever opportunities for practice offer. Some of these, originally from other States, come to reside permamently in Louisiana, while many Louisianians emigrate elsewhere. The purpose of the law is patriotic, but entirely inconsistent with the liberal spirit which has always actuated the administration of the Hospital and calculated in the future to lower the standard of competency and impair the efficiency of its medical service."

That same year, Assistant House Surgeon, F. W. Parham, introduced strict antiseptic measures in the Obstetrical Wards and also instituted asepsis in his surgical service. This was one of the most important steps in the evolution of the present modern Charity Hospital. Nearly one-half of

the puerpurae of that year in the obstetrical wards of the Hospital suffered from septic fever. In the following year Dr. Parham's aseptic precautions produced astounding results. Dr. Ernest Lewis in his "Reminiscences" gives him due permit for the introduction of this life-saving innovation, when he says: "It is true this had been practiced before by Dr. Schuppert in his ovariotomy above mentioned, but not continued, and by Dr. LaPlace in his service, but also discontinued when he was called to Philadelphia, until revived by Dr. Parham, from which time it gained ground until it became the universal practice, when sterilizers were installed in the new amphitheatre." There is no mention of Dr. Parham's worthy achievement in the Hospital reports, although it was a very important milestone in the history of that Institution.

In the report for the year 1890 is the following announcement which may astonish many today to learn electricity was installed in the Hospital only thirty-three years: "The electric current of the Edison System was early in the year introduced and has been in daily use for general electrical purposes. The battery is in every way complete and furnishes both the "Faradic" and "Galvanic" currents. More recently the current has been introduced into the center room of the amphitheatre for cautery purposes and has proven fully satisfactory. The wires have been properly insulated and safeguarded against the causation of fire. The current is furnished as a gratuity from the Edison Company."

The long requested outdoor clinic buildings were constructed in 1891. There were two buildings, one for Women and Children, the other for Men and Boys. Both were two-story brick buildings, with sanitary roof, so constructed that an additional story could be added at any time should the exigencies of the Hospital require it. The present Board of Administrators took advantage of the foresight and vision of House Surgeon Miles by very recently constructing an additional story to the Men and Boys' Outdoor Clinic Building. Mr. Thomas W. Carter, the architect, thus describes these buildings: "There are two clinic buildings, alike in architectural design and finish, each having a frontage of fifty-six feet on Tulane avenue, with a depth of sixty-two feet on the cross streets. The Clinic for Women and Children is situated near the corner of Locust street, that for the Men and Boys on the corner of Howard street. They are designed after the Venetian style of architecture and finished alike after a uniform plan of construction. The principal fronts on Tulane avenue are each divided into three compartments, resting on a deep splayed basement, the center having a handsome arched porch resting on side pulasters, with a flight of granite steps ascending to the Entrance Hall, flanked with bold rustic coins. The side wings and all corners on the first floor are flanked with the same rustic work and with plaster antae on the second story, which latter rests on a massive belting course, and are crowned above with the handsome entablature and blocking course. In the center of each front is a pediment, with the year of erection, 1891, in raised figures on the panels. The windows are of large and proportionate size, surrounded with neat moulded architraves on each floor, and in addition, on the first story, they are keyed to the belting course. The buildings are arranged with a central hall on each story, flanked on either side with the various Reception and Consultation Rooms; the whole fitted up with all the necessary plumbing appliances for supplying hot and cold water in each consultation room, and with heating and ventilating apparatus required in modern hospital construction. The grounds have been laid off into lawns, with Schillinger paved walks and the entire frontage on Tulane avenue has been enclosed in iron fencing, of ornate and durable workmanship, resting on a basement of brickwork, cemented to imitate stone." These buildings were considered the dernier mot of Hospital construction.

Dr. Miles sounds a note of warning anent the well known abuses that unfortunately have crept into and become a menace to an Institution dedicated solely to the relief of the poor, in the following: "We will be enabled to organize more thoroughly the system of outdoor medical relief, and better restrict the charity to those who deserve

it. The Outdoor Clinics are established for the benefit of the poor, and it must be understood that those who come here for relief cannot afford medical attention elsewhere. There should be no conflict between this work of medical relief for the benefit of the poor and the avocation of the physicians of New Orleans. In the medical management of these clinics we bespeak their favor and co-operation."

In the annual report of House Surgeon Miles for the year 1892 is taken this interesting comment on the recently established Outdoor Department: "The organization of the Outdoor Clinics as a separate Department and their inauguration on the 12th of April under the auspices of his Excellency, Governor Francis T. Nichols, was a very important event of the year. These clinics are now thoroughly organized, offering facilities in the various clinical divisions for the treatment of all diseases, medical, surgical and special, occurring in men, women and children, white and colored. The medical service in this department has been improved by the election of a corps of externs who supplement the work of the interns without any official friction."

Garrison, in his "History of Medicine," says: "The nursing of the sick at the hands of trained well bred women is an institution of modern times. The period from the latter part of the seventeenth century up to the middle of the nineteenth has been called the "dark age" of sick nursing, in which the status and competence of female attendants had sunk as low as the Hospital in which they served. Outside of the Roman Catholic orders in which discipline and decency still prevailed, this was almost universally the case."

The nursing in the Jean Louis and Almonaster's Hospital was administered by negro slaves and by convalescents partly able to attend the more afflicted patients. In fact this modus operandi was in vogue until the year 1834, when the Sisters of Charity inaugurated their long period of devotion to the indigent sick. These Sisters not only supervised, but did the nursing; their assistants were inadequate and incompetent, and were principally recruited from convalescent patients barely able to perform the lightest duties, and whose only remuneration was their meager board. This unsatisfactory and inefficient nursing persisted until the inauguration of the Training School for Nurses.

The first training school for Nurses was established June 15th, 1860, at St. Thomas Hospital in London and was endowed with the £50,000 known as the Nightingale Fund. But it was not until 1873 that such schools were inaugurated in this country. In that year they were organized in the Bellevue, New Haven and Massachusetts General Hospitals.

This all important question of trained nursing was agitated by the Board of Administrators in 1881. Encouraged by the glowing reports from many hospitals throughout this Country, its adoption was recommended. The following abstract from the report of December 31st, 1881, by Dr. Daniel C. Holliday, Vice-President of the Board of Administrators, evidences strong opposition to the movement, and is self-explanatory:

"In the connection we beg to state that the Board of Administrators sincerely regret a misunderstanding which arose between the Board and the Sisters of Charity—who have so long and so ably managed the details of our institution—and whose valuable aid no member of the Board for one moment failed to recognize and appreciate. The Board, knowing the growing demand for skilled and educated nurses in our City and State—and seeing the great advantages already obtained in Europe, and all the Northern and some of the Eastern cities of our Union, by the organization of Training Schools for the education of nurses, at once thought of inaugurating a similar school here, and necessarily the wards of the Charity Hospital as the proper field for such instruction suggested itself. With the above sole object in view, and feeling confident that an appreciative community would approve so laudable an object, the Board endeavored to introduce such a school in the Hospital. The Board never intended or thought that their motives would be questioned or in anyway be misinterpreted, but that the result showed how much they were mistaken. The misrepresentation and open assertions that this was only a move towards undermining the authority of the Sisters of Charity, and

ultimately to result in their services being dispensed with in the Hospital, no denia lon the part of the Board nor reiterated disclaimers against such purpose were credited, but only engendered more bitter and widespread opposition. The Board without abandoning their first conviction that such a school could be established and would never under proper management interfere in any manner with the Sisters of Charity and realizing that they had the power to introduce the school, preferred abandoning all such grounds."

Through the strength of the opposition and culmination of after events, this movement aborted. The untimely demise of Gov. Louis A. Wiltz, whose unexpired term of office was completed by Gov. Samuel D. McEnery, resulted in the demanded resignation of the sponsors of this great improvement in the nursing department. The personnel of the Board was completely changed Buchanan. On the first day of July, with only the exception of Mr. P. 1882, the new Board assumed the control and management of the Hospital and immediately proceeded to the election of a new House Surgeon. Dr. DeRoaldes was succeeded by Dr. A. B. Miles. These gentlemen suffered displacement because of their strong sense of duty and their fearless contempt of personal consequences while acting for the best interests of the Institution.

From the following quotation taken from the report of the Treasurer for the year 1882, an apercu is had as to the progress made towards the accomplishment of the Training School for Nurses by the Wiltz Board: "During the year 1881, and the early part of the year 1882, about twenty-two hundred dollars ($2200.00) of the funds of the Hospital were expended in connection with the inauguration, equipping and maintenance of a Training School for Nurses, including fifteen months' rental of a building suitable for the purpose. For the some months past a controversy has been pending between the Board of Administrators of the Hospital and the Board of Directors of the Training School, relative to the reimbursement of said amount to the Hospital, and to the possession of certain articles of furniture and household effects, which controversy has, within the past few weeks, been settled by the delivery to the Hospital of the property referred to, valued at about $600.00 and the withdrawal of all legal proceedings for some time past pending in the Civil District Court of this parish."

This most important movement was thus squashed and our Hospital was deprived of Trained Nurses for fourteen years.

In 1889 a combination of public-spirited women undertook to organize the New Orleans Training School for Nurses. These same ladies established the Women's and Children's Hospital—with Training School for Nurses, on St. Joseph street, which was the precursor of the New Orleans Sanitarium and Training School for Nurses established in 1893 by physicians of the city.

Dr. Ernest Lewis in his "Reminiscences" narrates an interesting chapter in this period of the History of the Hospital: "The Training School for Nurses was organized in 1894, during the first year of my chairmanship. Dr. Bloom, who succeeded Dr. Miles as House Surgeon, and had as assistants, Drs. Fortier and Parker, worked very hard to get the consent of the Sisters. When the subject was first broached to Sister Agnes, she refused, for she sensed that trained nurses under the direction of untrained Sisters would prove embarrassing, and she would not consent to their undergoing training until Dr. Bloom proposed to go to Emmettsburg, and after interviewing members of the Council Board, consent was given, provided the sisters were excused from obstetrical or gynecological nursing, which was agreed upon."

In the 1892 report of House Surgeon Miles there is the following announcement of the organization of a training school for nurses, and the promised erection of a suitable home: "The organization of the Charity Hospital Training School for Nurses now in charge of your special committee intended to carry out the system of nursing contemplated by Sister Agnes, is a matter of very great importance, and this movement should be fostered in every possible way. As soon as the means of the Hospital will permit a home for the nurses should be erected on these premises."

In the report of Vice-President Wm. G. Vincent, is mentioned that a suitable home for the nurses had been provided;

"the most prominent of which (improvement) consists of the erection of an additional story to the building known as the "Annex of 1884," which is 160 feet long by a depth of 60 feet; constructed for the use of our Trained Nurses as dormitory and sleeping quarters. There are five double and eight single sleeping rooms, a lecture room, dining and sitting rooms, library and improved closets, together with all modern improvements." This is the White Female Department Building. Through his energy and non-relenting efforts the establishment of the School is greatly due.

House Surgeon Miles in his last report, dated February 12, 1894, makes this important announcement: "The Charity Hospital Training School is now permanently organized and in operation," and also mentions that the Nurses are domiciled in the Annex, in the additional story added for their use, but which should be considered only a temporary provision, and states that: "Suitable accommodations can only be provided in a separate home for nurses." He also mentions that: "The trained nurses are engaged at present only in the Female Department. It is contemplated by Sister Agnes, as early as practicable, to introduce trained nurses in all the wards of the Hospital. In this connection the advisability of a Training School for Male Nurses is being carefully considered."

The school was organized under the direction of Sister Agnes, with Miss Agnes O'Donnell, a graduate of Bellevue Hospital of New York Training School for Nurses as Superintendent. The courses of lectures were inaugurated by Dr. Stanford E. Chaille in January, 1894. He resigned a short time afterwards. The first faculty of lecturers was composed of Drs. J.. D. Bloom, chairman; Joseph Holt, L. F. Reynaud, W. E. Parker, Paul Michinard, E. D. Fenner, J. B. Elliott, Sr., S. P. Delaup, Edmond Souchon, T. S. Kennedy.

The pay for the nurses was $8.00 for the first year and $12.00 for the second. The first graduation was on December 11th, 1895.

(To be continued)

ASTRAGALECTOMY (WHITMAN'S OPERATION) FOR RELIEF OF CERTAIN FORMS OF PARALYSED FEET.*

By PAUL A. McILHENNY, M. D., F. A. C. S.
New Orleans.

In 1901, Royal Whitman began advocating the enucleation of the Astragalus as a means of stabilizing the ankle joint in cases of paralytic calcaneus, in doing so he presented to surgery a procedure for producing a stability at the ankle in certain forms of paralysed feet which up to the present has never been surpassed. Although at first the operation was only resorted to for the relief of deformities resulting from complete paralysis of the plantar flexors of the feet it has since been used in various types of foot deformities, both congenital and acquired, and when carried out according to the minute details as laid down by its originator, has given universally good results. Since its origin it has been used for the correction of various paralytic foot deformities in almost a countless number of cases, and today is the operation of choice in the majority of cities where modern Orthopedic Surgery is practiced. As the centers for abduction and adduction of the feet are the joints below and in front of the astragalus, hypermobility in these joints, caused by a paralysis of the muscles supporting them, produces deformities which greatly incapacitate patients so afflicted. Astragalectomy with displacement of the feet backward produces a mechanical hindrance to normal mobility yet allows enough motion to enable the patient to eventually walk with quite a normal gait; it obviates the necessity of braces and even specially constructed shoes, and when there is an accompanying paralysis of the quadriceps extensor the stability in the ankle allows the knee to be locked in hyperextension. Primarily this operation is indicated in cases of paralytic calcaneus, and is to be recommended in paralytic flat-foot when the adductors are paralyzed and the dorsal flexors weakened; in paralytic club-feet when the abductors, extensor longus digitorum, and extensor propius hallusis are paralysed, and in flail or dangle

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feet in which there is almost a complete paralysis of the entire group of dorsal and plantar flexors; it is also to be recommended in adolescent and adult cases of congenital club-feet of marked degree with very resistant structures, and in certain deformities of the feet resulting from spastic paralysis. In the majority of paralytic deformities of the feet there is almost always a contraction of those muscles which were not affected by the original condition; if such be the case all contractions should be overcome by manipulations some time previous to operations for astragalectomy so that at the time of operation the feet may be easily placed in the position best calculated for weight bearing. In cases complicated by quadriceps paralysis Knock Knee is often a secondary deformity, and should be corrected by osteotomy before astagalectomy. Although this operation may be easily performed, it is absolutely necessary that certain details be borne in mind and carefully carried out, otherwise the result may be unsatisfactory to operator as well as patient. In other words, "if we are going to perform Whitman's operation, follow Whitman's directions if Whitman's results are expected." 1st. The foot must be displaced backward till the Tibia fits into the concave portion of the surface of the Os Calcis, and the malleoli grasp the neck, with the external malleolus well forward on the external aspect of the Cuboid; this brings the tibia into direct contact with the scaphoid and prevents dorsal flexion. 2nd. The foot must be placed in a position of slight Equino-valgus, the degree of equinus depending on whether or not there is a quadriceps paralysis. When the foot is displaced backward weight is transferred nearer the center, and greater stability is acquired because of dorsal flexion being limited by the tarsus impinging on the tibia; lateral mobility is at the same time limited by the malleoli grasping the neck of the Os Calcis. The operation consists of a curved incision beginning two inches above, and back of the external malleolus, curving down about the malleous and extending across the dorsum of the foot; the peroneal tendons are dissected free, and are either cut or displaced; the tendon of the extensor longus digitorum is displaced inwards, and all structures about the external malleolus, and over the dorsum extending to the head of the astragalus are severed; the foot is then dislocated inward and attachments about the external and internal aspects of the astragalus severed; the astragalus is then pried or twisted upward and outward until its posterior attachments can be severed when it may be delivered. The foot is now further dislocated to the inside, and all loose ends of capsule, ligaments, etc., are trimmed off; the articular surfaces of the malleoli are pared off and refashioned to fit more accurately about the os-calcis; the posterior portion of the scaphoid and the external portion of the cuboid are gouged out to make beds for the malleoli when the foot is displaced backwards; fixation sutures are placed from scaphoid to tibia and from cuboid to external malleolus to temporarily maintain positon. If the case was one of calcaneus deformity with active peroneals, these tendons should be severed and transplanted into the Tende Achilles, otherwise they are returned to their original position. Interrupted sutures are placed in the anterior and lateral ligaments, and the skin closed in like manner. A plaster cast should be applied from toes to knee with the foot held in a position of slight equino-valgus and backward displacement. As the operative field is free from large vessels no excessive bleeding occurs, but because of the extensive traumatism considerable ooze may be expected, it is therefore wise to cut a fenestra in the cast before it hardens to facilitate inspection and dressing. As soon as the wound is healed the fenestra is closed, and the cast kept on for six weeks; a new cast is then applied and a more desirable position of the foot secured if necessary; a heavy piece of felt or cork is incorporated in the cast under the heel to make up for shortening, and the patient encouraged to begin walking. It is surprising to see how soon patients walk, and in many cases without pain. Cast or brace support should be continued for about four months after operation, after which ordinary shoes with raised heel, and in some cases raised sole also may be used. Because of greater stability, greater functional use follows, and within a year

it will be noticed that the limb has begun to develop more rapidly, and the patient to walk quite naturally.

I shall only cite three cases at this time, each of which is illustrative of a type in which astragalectomy has proved, one might almost say, curative.

Case 1—E. V., 14 years. Paralysis of Quadreceps extenso, Semitendinosis, Semimemzranesis, Adductors, Abductors and Dorsal flexors of right foot. Leg two inches short, and Knock Knee. Was wearing high brace and walked with effort. Operation June 22, 1921. Osteotomy of Femur two inches above Condyles. Knock Knee correction. Three months later Astragalectomy and backward displacement of foot. Now walks well with raised heel and sole. No brace used.

Case 2—H. H., 15 years. Weight 211 pounds. Paralysis of Dorsal flexors and Abductors of right foot. Abductors weak. Position of Paralytic Club-feet; had worn ankle supporting brace, and was walking on outer side of feet.

Operation June 20, 1922. Astragalectomy, etc. Now walks well and dances. No brace.

Case 3—M. H., 12 years. Paralysis of Quadriceps, and complete paralysis of dorsal and plantar flexors of right foot. Could only walk with crutches. Leg two inches sharter than other.

Operation January 27, 1922. Astragalectomy, etc. Now does not use crutches, and walks well with no support other than ordinary shoe.

SITUS INVERSUS VISCERUM TOTALIS OR COMPLETE TRANSPOSITION OF THE VISCERA.*

GEORGE S. BEL, M. D.,
New Orleans, La.

Situs Inversus Viscerum Totalis or complete transposition of the viscera is one of the most ancient conditions and its anatomical peculiarities led to many curious theories of causation, and was, in the early days of medicine, looked upon as an anatomical curiosity and of particular interest to the anatomist and pathologist, but of recent years, it has become of utmost importance and immense significance to the clinician in arriving at a correct diagnosis by intelligent interpretation of the physical signs, and tremendous importance to the surgeon in thoracic and abdominal operations.

The early reports came from the anatomical room and pathological department, but the recent ones are mostly recognized during life by the clinicians, due to the more frequent and careful routine examinations aided by the use of the X-ray and, in some instances, by the Electrocardiograph.

From the historical point, it is one of the most ancient conditions as Aristotle observed two cases of transposed organs in animals (Liver and Spleen). The next reports are found in the Sixteenth Century. In 1912, Karashima placed before the profession in catalog form a complete list of previously published cases; since then, a number of cases have been reported and among the most recent are Brimblecombe, Williams, Sherk, Funk and Singer. In some of the cases reported, the transposition was complete, implicating all of the viscera, while in others, it was partial; occurring more frequently in males; when in females, it does not interfere with parturition.

As to the etiological factor in the production of this peculiar anomaly, many theories have been advanced, but none have been definitely proved and still a subject for much criticism except that these anomalies have their causative factor operating at a very early embryonic period. The time allotted to this subject will not, at this reading, permit of a detailed description of the various theories propounded.

I feel this case is of sufficient interest to be presented:

J. J., British Honduras, colored male, aged 29 years, seaman by occupation, admitted to my service in Charity Hospital on account of dysentery.

Complaint: Pain in abdomen and frequent bowel movements.

Family History: Negative.

Past History: Had measles, mumps, whooping cough when a child—sore on penis six years ago; chills and fever four years ago and influenza in '915.

Habits: Was an alcoholic, drank all the whiskey he could get.

Present Illness: About 5 weeks ago, he suddenly developed a pain in the region of the umbilicus, followed by frequent stools which continued throughout his illness and the stools consisted mostly of mucus.

Physical Examination: A poorly developed, undernourished colored male, 5 feet, 9 inches, weighing 125 pounds.

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A complete physical examination was made and I will leave out the minor parts in order to save time and suffice to say the Head, Face and Neck were negative.

Thorax: The chest was normal in shape and equal in expansion. The lungs revealed normal pulmonary resonance and respiratory sounds throughout. The apex beat could not be felt on the left side but was visible and palpable in the right, fifth and sixth interspace just within the midclavicular line. The right border of the heart dullness was 8 cm. to the right of the sternum in the fourth interspace and the left border of the heart corresponded to the left border of the sternum. The space which corresponds to the normal cardiac dullness on the left of the sternum was resonant. Auscultation on the right side of the sternum and over the sternum, the heart sounds were loud, distinct, and of normal quality. (No murmurs.)

Examination of the abdomen revealed a slight prominence in the upper left quadrant and on palpation, the lower part of the liver could be distinctly felt, extending about two inches below the costal margin, but was sensitive on pressure and moved with respiration. Percussion showed the liver dullness began at the 5th rib in the midclavicular line and extended to about 2 inches below the costal margin.

Traube's semilunar space which is normally hyperresonant because of the underlying stomach is now dull due to the position of the liver.

The splenic dullness was determined on the right side, corresponding to its normal position on the opposite side. The genitalia, extremities and reflexes were normal. This man was right handed.

Blood and urine examination negative except a slight leukocytosis. Wassermann negative.

X-Ray examination revealed the heart on the right side with transposition of the liver, stomach and colon.

The autopsy revealed a complete transposition of the thoracic and abdominal viscera, also vessels and nerves, the dome of the diaphragm higher on the left side, etc.

As to diagnosis and comment, no better illustration can be of the achievement in the scientific development of medical practice than the methods of physical diagnosis which are recognized as most applicable to the determination of the anatomic and physiologic deviations caused by the transposition of the thoracic and abdominal viscera, consequently emphasizing the importance of making a complete and thorough examination in every case.

The modern methods employed in Roentgenology have increased our armamentarium from the diagnostic side and allow early recognition with the correct interpretation of this rather uncommon curious anomaly.

It is of extreme importance to determine the presence of transposition of the thoracic and abdominal viscera and the most significant diagnostic point is their anatomic localization, especially when concerned in the surgical pathology of thorax and abdomen.

It must be remembered that congenital misplacement of the heart is rare compared with displacement from pathological conditions which mechanically influence its position and that the morbid lesions that displace the heart are usually readily recognized. In the abdomen when the liver occupies its opposite position, it may be mistaken for enlargement of the spleen, for example, as we have in malaria, leukemia and other abnormal conditions. An acute attack of the transposed appendix or gall-bladder may not be suspected until serious damage has occurred or, in women, may be mistaken for tubo-ovarian disease.

In conclusion, I wish to emphasize the following points of interest:

1. The functions of the various organs in this case appeared normal, and up to the time of the attack of Dysentery, patient was perfectly healthy, and the complete transposition had no influence on the health of the individual.
2. That transposition of Viscera is not so uncommon, as pointed out by the literature.
3. That is is no longer looked upon as an anatomical curiosity but of extreme interest and great importance to the clinician and surgeon.
5. The importance of a complete physical examination in every case as a routine procedure, aided by X-ray when possible.

5. A case of complete transposition of the thoracic and abdominal viscera, diagnosed by physical methods, subsequently corroborated by X-ray, and, finally at the autopsy table where it was photographed.

DISCUSSION.

Dr. Lester J. Williams (Baton Rouge): Doctor Bel has very ably presented this peculiar and bizarre anomaly, and it was a great treat to listen to his paper.

I very recently had a case of supposedly double heart sent in for examination, an old negro woman about 65 years of age. I examined her and found it was a case of situs inversus. I wanted her to take a barium meal, but she refused and promised to come back later. She did not come back however, and I learned that, never having seen an X-ray apparatus before, she thought that I was trying to conjure her, and refused to return.

Dr. J. Birney Guthrie (New Orleans): Acquired displacement of the viscera is an everyday occurrence, but the fact that the case here presented is one of congenital inversion of the viscera makes us feel that it may be more common than we judge.

I would like to ask Doctor Bel whether there were three lobes in the left lung, and whether the aorta was on the left side. Also it would be interesting to know whether the recurrent laryngeal on the right went around the arch of the aort or around the subclavian.

Dr. A. A. Herold (Shreveport): When we learn to examine all our cases thoroughly—when we have time to do so, we will probably find more of these cases. During the war we had two such cases in Shreveport, before the Medical Advisory Board. The whole point is that if we study our cases more thoroughly, make a complete physical examination of every patient, I have no doubt we would find the condition more common than we suspect.

A CASE OF STREPTO-COCCUS MENINGITIS

By DR. S. CHAILLE JAMISON,
New Orleans.

R. S. Serial No. D. 8259. Admitted to Ward 14 Charity Hospital January 20th 1923. Complaining of headache. His family history and past history contain nothing of note. His present illness began on December 20th, 1922, when he began to have earache about three o'clock during the afternoon. The following morning the pain in his ear was so severe that he was unable to sleep; it was somewhat relieved by warm instillations of castor oil but was not completely relieved until later, when a thick yellowish pus began to discharge. This discharge lasted for about four days and then ceased. Some three days after this, headache began, which was more intense when the head was in a dependent position. The headache has become more severe day by day and is unrelieved by any medication. He is uncertain as to whether his temperature has been elevated or not, though he was told by his attending physician that his body temperature was about 101. He has vomited twice. The character of the headache has been throbbing, and is located more particularly in the occipital region.

Physical Examination: A well-developed, well nourished white male adult, who does not appear to be very sick or in great pain. The head and scalp are negative. The external ear shows no discharge and the hearing is normal. The heart and lungs are negative. The liver is not enlarged, the spleen is not palpable, and there are no areas of rigidity or tenderness, and no masses in the abdomen.

Reflexes: The pupils react normally to light and distance. The abdominal and cremasteric reflexes are present. The biceps and wrist-jerks are normal, the patella reflexes are entirely absent. There is no rigidity of the neck. The urine was negative except for a few hyaline casts. The blood showed 10,250 white cells per c. m., 82 per cent of which were neutrophils 11 per cent small lymphocytes, and 7 per cent large lymphocytes.

An oculist's examination of the fundus revealed a suggestive early optic neuritis. An eye, ear, nose and throat specialist reported that the drum membranes were clear, the mastoids not involved. X-rays of the sinuses were negative. The temperature was normal, the pulse 60 to 80, the respirations 16 to 20 until the day before death, which occurred on the 27th, when the temperature rose to 101 with a pulse of 136 and respirations of 26.

DISCUSSION.

When this patient presented himself in the ward, it was fully realized that it was probable that he had either a cerebral abscess or meningitis. In the face of the negative history, however, and particularly the negative physical examination, it was seen that this diagnosis was not entirely applicable. The absent patella reflexes strongly suggested syphilis of the cerebro-spinal system, while

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the normal temperature, pulse and respiration with the low leucocyte count, certainly did not point towards an abscess or meningitis. The examination of the aurist and the radiologist made us feel fairly sure that the ear or sinuses presented no suppurating focus. While the early optic neuritis could have easily accompanied an abscess or meningitis, it seemed just as well to point to a syphilitic cerebro-spinal involvement. The negative blood Wasserman certainly did not exclude syphilis of the cerebro-spinal system.

We felt at this time that every precaution had been taken to exclude an abscess, and we therefore felt justified in doing a spinal puncture. It must be borne in mind that spinal puncture is contra-indicated where abscess of the brain is in serious question, due to the fact that the lowered tension of the fluid precipitates rupture of the abscess.

January 3rd, 1923, 40 c. c. of cerebro-spinal fluid was withdrawn and found to be under some tension, with a strongly positive Wasserman reaction. A normal cell count, no increase in the globulin, a negative Colloidal Gold curve and a negative culture.

Immediately following the puncture, the headache seemed to be relieved. On the 24th, the patient appeared to be septic. He still complained of severe headache, he was irrational at times, and the temperature rose to 99.On the 25th the pain in the head was less, but slightly rigidity of the neck was noticed. Another spinal puncture was done and 50 c. c. of fluid drawn.It was found to be turbid, to contain innumerable pus cells and a pure culture of streptococci. The Wassermann was strongly positive.

The diagnosis was now of course obvious and clinically it appears that the spinal puncture was a grave mistake, and if it did not bring about, certainly precipitated the spread of the walled-off pus, and excluded any hope of saving the patient's life. The next day the frank signs of meningitis were present—that is rigidity of the neck, Kernig's and Babinski's signs with strabismus and inequality of pupils. On the night of the 27th, the temperature rose to 104, pulse to 150, respirations to 30 and the patient died, one week after admission.

An autopsy held the same day was as follows:

On opening the cranium, the dura was found intact. No pus was found beneath it or at the base of the brain.The lateral ventricles contained a muddy white fluid. On opening the right internal ear, a large quantity of pus flowed into the base of the skull. The drum membrane and the mastoid cells were found to be clear. The exact origin of the pus could not be determined, but it appeared to come from the petrous portion of the temporal bone. Smears made from the laternal ventricles, the meninges and from the pus in the region of the right internal ear showed streptococci.

Comment: Exclusive of epidemic meningitis, tubercular meningitis and traumatic meningitis, the literature is unanimous in stating that streptococci meningitis heads the list and Gunert states that 91 per cent of the cases of streptococcus meningitis follow chronic otitismedia. This, however, is not the experience recorded at the Charity Hospital. During the last 17 years there have been only 14 cases of meningitis, exclusive of the types named above, and of these pneumococcal meningitis easily leads, of this type 11 cases having occurred, 1 each of streptococcus, staphylococcus and influenza meningitis.

There is little doubt that early operation, while the meningitis is still localized, offers the only reasonable prospect of success, and that recovery is very exceptional when a case has reached the stage in which micro-organisms are present in the cerebro-spinal fluid. I feel that lumbar puncture is contra-indicated in these cases, although it might be an advantage to know that the cerebro-spinal fluid was negative, thereby indicating that the meningitis was localized, and that surgical drainage would be efficient. It is obvious, however, that operative procedures should promptly follow the lumbar puncture if they are to be undertaken at all.

Bowers reports one case of streptococcus meningitis in which the lumbar puncture showed streptococci, which recovered following operation. Patzig reports a case which recovered following simple lumbar puncture. Shaw reports a case which was treated by repeated lumbar punctures with recovery Others report cases which have recovered after sub-tentorial drainage.

In conclusion, I wish to emphasize the fact that any case presenting any symptoms of cerebral involvement following ear disease should be regarded with the utmost anxiety, and that a most careful study should be undertaken to exclude epidural accumulations of pus before spinal puncture is performed. In the case which I have reported, no effort was spared to this end, and yet we failed most lamentably, with possibly disastrous results to the patient. It is probable that the absent patella reflexes were purely a coincidence in this particular case and it is possible that the Wassermann was positive due to the active inflammatory process going on. In the future I expect to have more detailed x-ray pictures made with the hope that they may show areas of necrotic bone.

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DISCUSSION.

Dr. Homer Dupuy (New Orleans): If meningitis and brain complications belong to any one specialty, certainly the otologist and rhinologist gets his share of them. I believe it was McEwen of Glasgow who said that 80 per cent. of acute intra-cranial infections are of otitic or sinus origin, and when you consider this anatomical fact, that the optic nerve and the auditory nerve apparatus have around them a perineural space which is really a subarachnoid space; the middle ear, the nose, and the orbital cavity, can readily carry infection along these nerve tracts.

This case is unusual from the fact that there was apparently no focus of infection along the ear, sinus, the nose or the eye channels. Between the petrous portion of the temporal bone and the sella turcica lies the third cranial nerve, the sixth nerve. It is remarkable how meningitis at that point did not cause paralysis of some eye muscles on that side due to pressure on these nerves.

I quite agree that puncture of the cerebrospinal canal is not always safe in the presence of a meningeal infection. There may be a deep-seated abscess giving apparently no objective or subjective symptoms, such a puncture is contra-indicated in cerebral abscess.

It may be well to stress the fact that every ear infection is a potential cerebral complication, and we should also remember that the labyrinthine apparatus and the auditory nerve are surrounded by a portion of the dura.

This patient might have had an acute rhinitis or frontal sinus trouble lasting only a few days with the infection having traveled along the perineural space of the olfactory terminals in the nose—or along vascular routes from the frontal sinus.

Dr. J. Birney Guthrie (New Orleans): Dr. Jamison is unquestionably correct in refraining from lumbar puncture where abscess of the brain is suspected or brain tumor near the base. Dr. Dupuy has emphasized the contra-indications. In a rather extensive experience with meningitis I think there is much more good done by performing puncture for diagnostic purpose than by avoiding it. I do not think Doctor Jamison has anything to reproach himself with in having made a lumbar puncture in this case. I believe in the long run, there will be more harm done by omitting lumbar puncture in these cases than from performing it. In the cases that showed middle ear complications in the Army the lumbar puncture was often the means that gave us our diagnosis. Certainly when meningeal symptoms are present and we have middle ear infection, we do lumbar puncture. Theoretically, there is objection to the use of puncture, and that might hold in specific meningitis. It is conceivable that a localized specific meningitis might be disseminated through lumbar puncture, but in the long run more good comes from the puncture in determining diagnosis than from omitting it through fear of complications.

Dr. S. Chaille Jamison (closing): I simply want to emphasize the failure of the laboratory procedure to give us warning. I was fully cognizant of the damage where there was no question of pus in the brain, but I looked to the laboratory to give me warning. For instance the cell count—it did not show it; the pulse and temperature were normal. I merely want to point out that in spite of these facts we went in, and I believe did this man irreparable damage. I have done two or three thousand lumbar punctures, but this is the first time I felt I ever did anybody anything but good.

WHAT THE STATE IS NOT DOING FOR ITS MENTALLY DISEASED.

HENRY DASPIT, M. D.,
New Orleans, La.

It is not my intention to present to you any scientific consideration of the handling of the mental disease problem but rather to call your attention to public indifference and inertia in this field. By the state I mean the whole mass of its citizens of which we as individuals form a part, knowing full well that any real censure will be principally ours as we represent the accredited scientific profession dealing directly with such matters. If one seeks an explanation of such on unfortunate attitude on the part of medical men of our State, it may be found in the medical education they received in days only slightly removed both here and in other schools. It was undoubtedly the experience of most of you during your medical university life to have been told nothing whatever regarding morbid mental states or to have had the matter glossed over in a purely

*Read Before the Louisiana State Medical Society, April 24-26, 1923.

perfunctory manner. Within comparatively recent years there has been qutie an awakening in the psychiatric field. A newer and broader understanding has developed as to the factors playing a part in morbid mental states and a more humane and intelligent attitude toward the handling of psychotic individuals. It is well for all of us to remember that this interest is not confined to the psychiatrists and medical men but that it forms a considerable topic with the public as a whole. It accordingly behooves every one of us to become more conversant with the advances being made in psychiatry and if we in any sense live up to our obligations it will be in the field of prevention where our greatest effort will be centered.

You may expect to hear a denunciation of our State hospitals but such is most remote from my purpose. Be it well understood that there is no individual or institution held up for criticism or ridicule as I have nothing other than the sincerest respect and praise for the Superintendents of our State hospitals who are working under handicaps of a nature little appreciated by the profession or the public. My own observation of years past as a resident of the East Louisiana Hospital has been supplemented by recent visits to both of our State hospitals as well as to the State Colony and Training School at Alexandria. The general condition as to housing and scientific care have shown material improvement and there exists an esprit de corps which is most commendable.

What is our present situation? We have in our State two hospitals for the care of mental disease and the initiation of one for the care and training of mental defectives. Did it ever occur to you that Louisiana supports more beds for mentally diseased persons than the sum total of all other conditions? This naturally does not include hospitals supported by private enterprise. Even among these will be found much space given to psychotics. Both of our psychopathic institutions are overcrowded beyond all reason. The one at Jackson is much over two thousand, while Pineville is rapidly approaching the same mark. This excess is necessitating the reconstruction of many central features such as kitchens, laundries, dininghalls and so on which are comparatively new but planned to meet smaller demands. This is growing worse daily. From no less an authority tha nthe National Committee for Mental Hygiene comes an opinion that psychopathic institutions of greater population than fifteen hundred to two thousand are undesirable. This means that East Louisiana Hospital at Jackson has reached its limit and that the State Hospital at Pineville admits of but slight increase. An attempt to offset such conditions was made by Dr. Joseph A. O'Hara, Coroner of this Parish, who sponsored a bill in the last legislature for the establishment of a third State hospital. This bill passed the Senate with flying colors only to die completely in the childish paper-throwing preceding adjournment of the House. It is fortunate that the spirit which actuated such an effort has not died and that the bill will be re-introduced when the legislature again meets.

What is the community doing, actually carrying out, in the way of any State program to prevent the development of psychopathic increase which will call for more hospital beds, or for the direction and supervision of patients discharged from our hospitals? In the first instance, I am ashamed to say, absolutely nothing. In the second, so little as to merit no comment. I will admit that a ray of light can be seen in the action of the Superintendent of the State Colony and Training School who has been farsighted enough to outline a real policy but this is quite individual. In some communities private agencies are making an effort but these efforts are largely isolated in single groups without any comprehensive co-operation. In New Orleans the out-door or clinic service of the Touro Infirmary is doing creditable work even with the handicap of no ward service. The Louisiana Retreat plans scientific development but is marking time as the result of public ignorance which has resulted in uncalled for opposition. The Charity Hospital is doing nothing either in recognized outclinics or appropriate ward space. The City Hospital while doing well in a limited fashion is far from being equipped to meet the community need. In the field of the men-

tally deficient, the Milne and the Gumbel Homes while merely scratching the surface at least offer a beginning. A very good example of public inertia even among those who claim much interest in this work can be found in the fact that the Louisiana State Society for Mental Hygiene is in a state of lethargy with its last meeting about the time our present Governor went into office. I happen to be a member of that particular association and personally am quite willing to shoulder my part of the blame for such inaction.

It is not sufficient for a community to feel that as soon as a psychopath becomes grossly maladapted to his environment he is promptly received into an already horribly overcrowded State hospital. It is rather unexplainable when one considers that we dip our cattle, immunize against hog cholera, protect our humans against small-pox, typhoid, diphtheria, etc., glory in our campaign for Public Health, become enthusiastic in our efforts for Social Hygiene and yet, as a body, hardly turn a hand in the advance of Mental Hygiene. The far-reaching effect of such activity should be apparent to all thinking people. For those who cannot think in terms of racial betterment, the purely economic side should appeal. It is one of our greatest faults that most of us think in terms of initial cost and lack the vision to appreciate ultimate results which may be attained long after we have passed on the work to others.

Before making any attempt to speak even broadly of measures which would look to a betterment of conditions, there is a thing of paramount importance and it is the absolute depoliticalization of all State institutions. You, who were present at the last meeting of the State Society in New Orleans or who attended the general meeting of the American Medical Association held here, heard our Governor paint terrible pictures of conditions and appeal most pitifully for assistance from the whole medical profession. You will remember quite well how he positively affirmed that all political influence would be removed from all State institutions. In justice to him, I am quite ready to admit that he reoppointed at Pineville a man who continues to get results; at Jackson, a man who came to our State highly endorsed and who has lived up to expectations. Also that these appointees have received his unqualified support and have in no way been hindered in the proper carrying out of their work. BUT! Two sessions of the State Legislature have passed during his term of office and what action has he taken to remove from the next Governor the power which he, himself, exercised? The power to remove from office a Superintendent who, as far as I have been able to find out, met with the approval of the Board intrusted with the direction of that particular hospital. This is the position every Superintendent of every State institution occupies. An incoming Governor may according to his whim or as the result of pressure for patronage remove any institutional head. The effect of such a situation on our hospital executives is to cause a constant unrest and uncertainty as to their tenure of office and is quite certain to detract from their efficiency. It also removes from the younger members of the staff the real incentive, the final reward of their effort. The resulting frequent changes in staff positions is certainly conducive to a low standard of hospital activity. It should hardly be necessary for me to say that each and every one of us should make it a point to see that our representatives in Baton Rouge support legislation to this end which will come before the next assembly.

After giving the men who govern our institutions some sense of security in their positions and making their removal possible only for adequate cause and after proper hearing, what can we do in the matter of a State program for Mental Hygiene?

The essential thing is a centralized direction of these activities which would coordinate such work: a Bureau or preferably a Department of Public Welfare. Under such a general department would function various bureaus dealing with special activities. Our chief interest now is in the Board or Bureau of Mental Hygiene which should be directed by a specially trained and experienced individual. The necessity of specifying that the director be qualified must be apparent to all as too many Governors have given conclusive evidence that they think because a man

has received a degree in medicine that he is capable of doing any detailed or specialized work. To outline the complete scope of such a bureau's activities is precluded by my time allowance and I will merely mention a few of the more important things that could be done.

Reasonable and constructive contacts could be developed with various Social Agencies dealing with the environmental surroundings of infancy and early childhood.

For the pre-school period, the encouragement of "habit clinics" where early morbid trends could be directed along proper lines. In such clinics, the realization that it is not only the child but most often the parent who requires direction would do much to smooth out many dificulties.

For the school period: A very close relation between the school clinics, psychiatric clinics, State and private schools for the defectives, correctional institutions and the Juvenile Courts. It is during this period that we will have the real opportunity of getting closest to the community. Our laws making it necessary that all children of a certain age attend school will naturally bring them all under scrutiny. Incidentally all schools whether public of private should be forced to conform to this principle of State supervision or be closed up.

A word about our State institutions.

There is no argument whatever against the need of a third State Hospital. Unfortunately its position will be much the same as that of those already operating but at the same time its location may be such as to make intensive work possible. I dislike the stress being laid on the necessity of establishing "a psychopathic hospital". Our present State hospitals are psychopathic hospitals or the public should know why.

The time has passed when State hospitals for the Mentally Diseased are solely places where our psychotics are sent for handling. They should be developed into centers of education to the general public. Whatever their location, they should have an outdoor or clinic service to cover their immediate country and from them "flying clinics" should go out at intervals. These clinics would fill a great need in communities removed from our general hospitals both in the way of prevention and for the observation and direction of patients who have been discharged or paroled from their respective institutions. The supervision of the discharged patient by the group that directed his hospital life is a very important point. Our state general hospitals should be obligated to conduct adequate psychiatric divisions, both clinic and ward services. This is most desirable both from the patient's standpoint and for the educational effect on the public. It is our duty to see that the public thinks of mental disease in the same way that they regard physical disease. The following words are from the report of Dr. C. Macfie Campbell appearing in the report of the Trustees of the Boston Psychopathic Hospital: "A sick person admitted to a general hospital, although on a special service, has at his disposal the consulting facilities of all departments. The resident staff usually consists of physicians specializing along various lines and the visiting staff is easily available. Under ideal conditions a patient with mental symptoms would also be taken to a general hospital, there to be admitted to a special service, and while in that service he would have available all the special facilities of the other departments should his symptoms require either special forms of examination or methods of treatment not available in his own department. In the actual situation patients with mental symptoms are brought to a separate hospital and not to a department which is an integral part of a general hospital."

Regarding the necessity for research, the need is too apparent to require anything other than mention.

The desirability of a more extensive parole system is known by all who have contact with our State hospitals. For the proper handling and supervision a Social Service Department is imperative. The East Louisiana Hospital has a single such worker who is expected to cover all phases of the institution's activities. This is naturally impossible. You may say that the cost would be prohibitive but I believe that Steckel of the King's Park Hospital, New York, has shown where it can be made a saving rather than an expense to the state.

He says: "Advocates of an expensive parole system often point to its financial benefits, while opponents reply that the added expense of a large social service department counterbalances to a great degree this financial advantage. In order to show in actual dollars and cents what has been saved the State at this hospital alone during the years 1918-1919 and 1920-1921, we have collected the following data: During the fiscal year ending June 30, 1919, we expended for salaries, wages, maintenance, and traveling expenses of the personnel of the social service department and for the transportation of patients, $4,496.38. During the year the daily average number of patients on parole was 304.

"In the year ending June 30, 1921, owing to a large increase in the personnel of the department and the resulting growth of its activities, $14,410.92 was expended for salaries, maintenance, and so forth. However, as a result of the increased activities rendered possible by the augmented personnel, the daily average number of patients on parole during the year was increased to 669, a gain of 365 over the year ending June 30, 1919. The annual cost of maintenance in the hospital being $379.53 per patient, the gross saving amounted to $138,528.45, or a net saving of $134,-613.91.

"This does not take account of money earned by patients who were employed during their parole period. 280 earned during their parole period $134,344.00"

All advances and innovations cost money but in the field of Mental Hygiene you are investing in the best possible crop.

WHAT LOUISIANA IS DOING FOR HER INSANE.*

JOHN R. THOMAS, M. D.,
Pineville, La.

I am grateful for the opportunity, the honor and pleasure of saying a few words to you this morning on the subject of "What Louisiana is doing for her insane."

It is my belief that a very limited number of our best informed citizens know what the State is really doing for its insane. As time is limited I will be as brief as possible in order to cover the essential points which I wish you to know.

For convenience of administration the State is divided into two districts for the insane, the first district comprising most of the Southern and Eastern parishes including the city of New Orleans, while the second district is composed mainly of the parishes in North and West Louisiana and a few parishes of Central Louisiana.

There are two large Hospitals for the insane in Louisiana and a colony for the feeble minded recently established at the old site of Camp Bearuregard.

One of the large hospitals and the larger of the two is the East Louisiana Hospital at Jackson and the other is the State Hospital at Pineville.

Patients from the first district are committed and sent to Jackson while those from the second district are sent to Pineville. That is the general rule but should there be vacancies in either hospital and no applications from patients in that district and should there be applicants in the other district they are sent to the hospital that can admit them. So overcrowded have been both hospitals in the past few years that this condition rarely occurs.

For you to understand and appreciate just how the State transacts its business of handling the insane up to the time of their admittance into one of the two state hospitals let me briefly give you the methods pursued.

When a patient is asked by relatives or friends or the citizens of a community to be committed to a hospital for insane the application is in this State made to the Sheriff or Parish Coroner and the Coroner then requests the Judge of the District Court to appoint a Lunacy Commission to examine the patient and pass upon his or her condition. This Commission is composed of the District Judge, the Parish Coroner, and one other physician appointed by the Judge. If this Commission adjudges the patient insane, he or she is then committed to the hospital in the district of which the parish of the patient forms a part. The Sheriff or the Coroner then writes the Superintendent of the hospital and makes request for the admission of the patient. If the request for the admis-

*Read Before the Louisiana State Medical Society, April 24-26, 1923.

sion of the patient is not accompanied by a question blank filled out, the Superintendent immediately sends a blank questionnaire for the Coroner to fill out and return, the object of which is to get as complete a history of the patient as possible to aid the hospital physicians in the proper diagnosis of the case. If there is room at the hospital the patient is immediately ordered brought in and this is usually done by the Sheriff who is often accompanied by one or more relatives of the patient. If there is no vacancy for immediate admission the patient is held at home until there is an opportunity for admission or if the case is violent and uncontrolable he is confined in the parish jail until advised by the hospital authorities that he can be admitted.

Unfortunately heretofore the requests for admission have always been greater than the hospital capacity of both institutions of the State and in spite of every effort on the part of hispital officials many have been obliged to remain in jails until such time as room could be provided.

So much for the detail of handling the insane up to their entrance into the hospital for care and treatment. Now for the State's care after their admission.

In Louisiana as in nearly all of the States of the Union, every hospital is administered by a Board of Administrators or Trustees who serve without pay. As a rule these men are selected from the ranks of the best citizenship; men who are known for the inprobity, ability honor and zeal in civic duty and righteousness. To this Board falls the duty of administering the affairs of the hospital.

It is their duty to perfect an organization not only to treat and care for the charges under their keeping and to see that it is well done but also to care for and protect the money of the taxpayers that is appropriated to maintain the institution.

This board selects an executive officer to carry out the rules and regulations prescribed and this officer is, in every well regulated hospital, a physician who organizes a staff of physicians, nurses, attendants and all necessary helpers to carry on the work of the hospital. It may not be amiss for me to say here, and I do so with all truthfulness that the members of the Board under whom I have served as Superintendent at the Pineville institution have been men of the finest rectitude and have served the State with great honor and credit and with great benefit to humanity.

To continue your interest in this subject, let me say that as soon as the patient is received he or she is turned over to the Supervisor if a male, or the Supervisoress if a female, and is bathed and fresh clothing is put on the patient who is sent to a receiving ward and placed under the care of a ward psysician and an attendant. All marks, scars, and bruises are noted and made a part of the patients record. The study of the patient is then begun by the ward physician. The patient is placed under his care and treatment until such time as this physician is ready to present him to the staff for diagnosis and their recommendations of treatment are outlined.

The staff is composed of all of the physicians of the hospital including the Pathologist and Radiologist.

Laboratory examinations of all secretions are made on all patients so that when the case is presented to the Staff every thing pertaining to both the physical and mental examination is unfolded. This enables the examiners to make a diagnosis and place the patient in one of the twenty-two classifications now recognized by the American Psychiatric Association and to outline a method of treatment best suited for the case. You can well imagine what a tremendous amount of work and detail this requires, and it is only those trained in psychiatry who can do so and get correct and effective results on diagnosis and treatment.

Every effort on the part of the hospital staff and assistants is exerted and put forth in the interest of the patient and the results at the Pineville institution have been most gratifying, between 25 and 35 per cent of the admissions being annually discharged.

Thus briefly I have outlined to you the manner of committing the insane to the State Hospitals and their reception and treatment.

There is no medical treatment per se for mental disease. When necessary,

of course, medicine is given for physical ailments but hope of restoration in cases that can be restored is usually directed to building up the physical body in the way of rest, food, and occupation. Patients shut up and kept in confinement offer little hope of improvement, much less cure.

The State Hospital at Pineville is without a properly equipped hospital building for the treatment of patients but another effort will be made at the next session of the legislature to get an appropriation for such a building, however, we do have a splendidly equipped laboratory building where all necessary analyses are promptly made.

The next question for your information would naturally be—Is the State doing all it can for these unfortunates? I will answer that by saying unqualifiedly "yes" and I believe that I can give you figures that will bear out my statement.

The total annual revenue or income of the State of Louisiana is approximately $3,750,000 and the appropriations of the legislature at its session in 1922 for the insane of the State and for the Colony for the Feeble minded was $836,000.00. These figures show that substancially one fifth of the revenues of the State is devoted to caring for its mental derelicts This is perhaps the largest single item in the budget of the State.

These figures were given to me by Hon. W. N. McFarland, Supervisor of Public Accounts, who is not only an authority on the finances of our State but a public official without a peer in this or any other State. I further say that no State in the Union in proportion to its revenues is doing more for its insane and few as well as Louisiana. The appropriation above mentioned does not include the money derived from the severance tax or better known as the money derived from a tax on the natural resources of the State.

A half million of this money was allotted to the State Hospital at Pineville and there are now nearing completion four magnificent fire-proof brick buildings, and a similar amount has been used at the hospital at Jackson in the erection of splendid buildings.

The present Governor of the State, Governor John M. Parker, has exerted his best talents and efforts for the betterment of conditions of the insane in the State and it is to his everlasting honor and credit that those magnificent buildings have been erected and the appropriations made as liberal as they are.

The real beginning of the uplift and inprovement in the treatment of the insane in Louisiana began under the administration of the late Governor Hall. The appropriations under his administration were greatly increased and not only provided for better maintenance but gave two magnificient dormitories at the Pineville institution.

Governor Hall was a kind and charitable man and took a personal interest in the charitable institutions of the State.

The administration of Governor Pleasant continued the liberal appropriations for maintenance initiated by Governor Hall, but made no appropriation to take care of the increasing number of insane in the State and this is the reason for the crowded condition of the State hospitals that has prevailed for the past two years. This condition is, however, nearly solved for at the present time there are, I understand, no insane in the country parishes of the first district and only about 25 in the second district and they will all soon be in the Pineville hospital. The population of the insane as this time in the State is about as follows:

Number of insane in State Hospital at Jackson	2020
Number of insane in State Hospital at Pineville.....	1075
Number of insane in City Hospital for Mental Diseases in New Orleans approximately	100
Number of Insane awaiting admission to Pineville	40
Making a total of.....	3235

DISCUSSION.

Dr. Joseph A. O'Hara (New Orleans): I have been going around this State for a number of years telling the people what a great lot of good we have been doing for the insane, and now I have to tell you what we are not doing for the insane. I notice at the night meeting on public health a lot of subjects are to be discussed—malaria, the prevention of venereal diseases, tuberculosis and everything else; but not one word about mental hygiene. I want to ask the medical man, does he know of any greater carrier of dis-

ease, especially venereal disease and tuberculosis, than the feeble minded? They are the greatest breeders of all disease, and yet the board of health passes them up, or lets them down without a statement.

We have heard a good deal about what the doctors are doing for the insane, butI want to say that Governor Parker is one of the greatest champions of the protection of the insane that Louisiana has ever had. (Applause.) He has selected competent men to fill the positions, and they are doing beautiful and splendid work; but we have done so little for the insane of Louisiana in the last decade that what we are doing for them today is absolutely picayunish. For out of every nook and corner of the State you can hear the voice of these unfortunate insane begging for the establishment of psychopathic clinics in every hamlet of the State. We have neglected the establishment of these clinics where the proper people—the family and friends and relatives—can be instructed in the correct method of development and study, in mental hygiene, so that these individuals through their long, weary lives may be of some value to the State instead of an incubus.

We of today are responsible for future generations, and if we are absolutely and personally responsible for future generations, we are absolutely responsible for every case of insanity that they inherit from this generation. It is our duty to wake up and do something for these insane. Remember, it is a duty that has been thrust upon civilization to care for and develop those unfortunates of society that are unable to stand alone.

Take the money that has been invested, and the valuable time that has been lost, and then come with me to Broad street, and see the splendid institution under the care of Doctor Daspit, and if he were taken away from that institution tomorrow it would have to close its doors because this big city of 420,000 donates the handsome sum of $18,000 a year to run it; this includes everything.

Then come with me to Boston and see the magnificent institution there constructed at a cost of one and a half million dollars, the Boston Psychopathic Hospital, endowed, with 100 beds for the treatment of acute insanity. They get $250,000 a year, and they are going to get more. We get $18,000 for the same thing that they get $250,000 for.

This can be corrected in only one way, and that is by the education of the people of the State and of the city. Preventive medicine is the cry from all important educational centers. You will be visited in a few weeks by political office seekers who will ask for your support. But ask them what they intend to do for the insane of the State—what do they intend to do for the Shreveport hospital, for the Charity Hospital, and for the insane of the State, and the T-B hospital; then you can say what you are going to do for them. If you are going to do anything with politicians it must be before they get into office. The politician is willing to do anything, and he means everything he says; but when he gets to the legislative halls a man tells him he has to have a road built, or a bridge built, or the State House wants a new coat of paint, and every time an appropriation is made they grab something from the amount that should go to the care of the insane.

As Doctor Daspit has told you, Governor Parker is in favor of caring for the insane in a better way, but I say it is your duty to go to your politicians when you go back and see that there is written into their platform a statement that they intend to care for the hospitals of the State, including those for the insane.

Dr. C. S. Miller (Jackson): Doctor Thomas has so well covered the field of what we are doing for the insane with the facilities we have, that there is not much left for me to say. I will say a word, however, in regard to a point he mentioned, and that is the increase of buildings. We have in the institution at Jackson increased our number of patients and have made room for them, and in so doing we have been able to take them into the institution much quicker. By doing this we have got results with a number of patients that possibly we would have not got, owing to the fact that they were removed from the jail and other places of confinement and did not become chronic in their mental disorder. So with the appropriation and the Severance tax we have been able to get the patients into the institution more rapidly and have been able to do something to help their condition.

The doctor also spoke of the treatment—that we did not use drugs. We make it a rule in our institution to handle our patients by giving them some form of hydrotherapy. Then the further treatment is occupational therapy. We think this is one of the greatest helps we have in handling mental cases. We know if they are allowed to remain to themselves they brood over their condition and gradually grow worse and worse. But if we can get them out of themselves, get them into some light work, maybe something they are interested in, and keep them occupied at all times, they forget their troubles, forget the disorders that are working within them, and are able, if not to improve their condition, at least not to go back. Some of them are brought to be useful to themselves and the institution. We have some patients that at first do nothing but unravel little bits of burlap, but this gives them occupation, and we build them up from that to where they can do other things, and after awhile they are really useful.

In placing our patients in the institution we place them according to their conduct and mental classification. For example, if we have a patient who is excited and has a tendency to become more so, we try to give him a quiet environment where he will not be around noisy people, and his excitement decreases.

The treatment and care of the insane at this time is practically in its infancy, but within the last few years it has advanced. We now have facilities, and as we have increased appropriations for their care and to put up proper buildings to handle these pa-

tients, we will get better results. We all know there are numbers of them throughout the State..

One of the other things the State has done is to provide a hospital for the feeble minded at Alexandria. Our institutions have been taking in the feeble minded cases throughout the State, and taking care of the feeble-minded there will relieve the State institutions and give us entirely psychiatric cases.

Dr. Clarence Pierson (Alexandria): I do not feel that I can pass this occasion without having something to say upon this subject, because of the long years I have been interested in this work.

I think the question is absolutely as Doctor Daspit has outlined to you, a question of prevention. The State of Louisiana, as stated by Doctor Thomas in his paper, has spent $1,836,000 in the last eighteen months. Twenty years ago they spent $135,000 in one year for the insane. We had no laws on our books at all. It is wonderful what has been done for this condition.

The question of prevention is up to the people of the State. Taxation has become so burdensome that it is no longer a question of whether we can have enough buildings, but is a question of the best education. The Charity Hospital that we all love so much, to which we all owe so much, has appealed to the public today, and it is really suffering because the State of Louisiana did not have enough in its exchequer to maintain it. We should have these psychiatric clinics throughout the State—we ought to have one at the hospitals at Shreveport and New Orleans. But we have no concerted action among the hospitals of Louisiana. Every one fights for its existence. An earnest appeal has been made to the Legislature for concerted action for these different institutions at Pineville, Jackson, Shreveport, and the hospital here. If we do not start in the medical school to teach the young man psychiatric work and laboratory work, you cannot expect them to do anything for this increasing population. It is an economic and scientific problem you must meet. So I say mental hygiene is the remedy. Every medical man in Louisiana ought to realize and know from his local conditions that it is necessary for him to rise and help relieve the local conditions by getting increased appropriations. The hospital for the feeble-minded is the entering wedge. How did we get that institution? By working for ten years in the Legislature and finally getting an initial appropriation of $25,000.

Dr. A. A. Herold (Shreveport): The State of Louisiana has done a great deal for her insane in the last few years. I served as coroner in Caddo from 1912 to 1916, and it was nothing unusual to have insane persons in the jail for four to six months, notwithstanding the fact that Doctor Thomas was doing all he could to take them off our hands. We were forced in many instances to release these patients because they improved sufficiently to let them go. I understand this condition does not exist today, at least not to that degree. That is due in great measure to the increase of funds from the Severance tax.

Going back to the question of taxation, we all know that in a few years, if the Severance tax holds, as it probably will, after the great agricultural college at Baton Rouge is established, there will be additional funds available, and we should keep our eyes upon our legislators. We have heard here of the great need of more money for the Charity Hospital, for buildings at Shreveport as well as New Orleans, also for the insane and for the tuberculous. We know money is needed for better roads and for other things. What conclusion can we come to? Ought we to go home and fight a reduction of taxation until we have more money available? Do not let reduction in taxation worry us. It is a test of good citizenship to stand up for sufficient taxation. The man who owns property should pay for the privilege of owning it—he should pay for citizenship. It would not be a bad idea to take it up with other state-wide bodies and fight reduction in taxation until these great medical needs can be taken care of.

Dr. L. L. Cazenavette (New Orleans): I have been instructing large clinics in the nervous wards of Charity Hospital for nearly twenty-five years. During that great length of time not only nervous patients have applied for treament, but scarcely a clinic day passes that there is not some patient suffering from mental disorder coming from alleviation of the condition. I assure you that I feel that this great Charity Hospital should establish a psychopathic department, whether it be by simply devoting certain wards for that purpose, or the establishment of new buildings with proper laboratory equipment, etc.—we are greatly in need here of an institution where the mentally affected can be studied before they are committed to the State institution for the insane. Just as Doctor Thomas has said, the law requires that a man be certified insane before he is admitted to some of these institutions. I believe it is a great injustice to ask men to certify that patients are mentally affected and have to be placed in these institutions unless these men have had special training in that line. These patients should be studied in a proper institution before they are committed to the hospital for the insane. I therefore want to voice the opinion that we should do everything we can for an appropriation establishing a psychopathic hospital in connection with the great Charity Hospital of the State of Louisiana.

Dr. John H. Thomas (closing): I wish to fully agree with Doctor Daspit and Doctor O'Hara on the urgent necessity of another institution in this State. The Jackson institution is over-crowded. The Pineville institution will soon have in the neighborhood of 1400 patients, and in another year its limit will have been reached, so there is urgent need for the establishment of another institution in the State today.

In my opinion hospitals for the insane should never have a population of over 1500. That is the maximum population in New York institutions.

As to the feeble-minded, if you want to stop feeble-mindedness, stop reproduction. Unsex both males and females who produce this kind of people. Pass laws of that kind, and in three generations 50 per cent of the insanity of this country will be abolished. I know one family in this State that had fourteen inmates at Jackson and Pineville at one time. The way to get at this things is to stop reproduction of the feeble-minded, and that can be easily done by unsexing them.

Dr. Henry Daspit (closing): There is one point I would like to stress, and that is that most of us in large urban centers think only of our own communities. We must think of the State. The establishment of a clinic at the Charity Hospital will meet the local need and probably some patients over the State will be benefited; but is is impractical to expect the vast majority of these patients to come to that clinic. Therefore we must make it our business to take the clinic to the patient. The American Red Cross service has rural orthopedic clinics that meet at regular intervals, and there is no reason why we should not have travelling psychiatric clinics for educating the communities in the need of mental hygiene. When that education has been brought about efforts must be made to properly sterilize the feeble-minded, as Doctor Thomas and many others feel will be feasible. We could not possibly get a bill before the Legislature in years on that subject, so we must get at the people in the country communities and do the work there, and not content ourselves with establishing clinics in fixed State hospitals.

THE TREATMENT OF TUBERCULOSIS: AN APPEAL TO THE MEDICAL PROFESSION.*

By WALLACE J. DUREL, M. D.,
New Orleans, La.
(Professor of Phthisiology, Tulane Post-Graduate School of Medicine)

Month after month the statistical reports of our Board of Health disclose that next to the diseases of the Circulatory System, tuberculosis gives the highest death rate.

When we pause to consider that in the past quarter of the century innumerable volumes have been written relative to the etiological, preventive and curative factors in tuberculosis, and that magnificent and forcible talks and lectures have been given by most earnest and energetic speakers; that various agencies in the form of Preventoriums, Clinics, Dispensaries, Sanitoriums, Hospitals, etc., have been instituted, and millions spent in the effort to instruct our population in how to combat the ravages of the dreadful White Plague; we can but feel that the present mortality and the prevalent morbidity of tuberculosis are somewhat dispiriting.

It is true that the mortality of tuberculosis has been somewhat decreased during the past twenty years of extensive campaigning. However the morbidity of the disease remains unaltered.

It is to be hoped that with greater educational facilities and better cooperation of the people, we can anticipate more gratifying results in the near future.

To my mind, one of the missing links so necessary for the application of methods which mean the eradication of tuberculosis amongst our great Commonwealth, is the unlimited support and more serious thought and education of our medical profession. The indifference, the skepticism, and at times the negligence in tuberculosis displayed by some members of the medical profession, have no doubt been retarding factors in the solution of the many intricate and difficult problems of prevention, diagnosis and treatment.

Here in Louisiana few of us have devoted any thought or time to the study of tuberculosis in its various branches, therefore, we are lagging behind the accomplishments of our eastern and western confreres.

No wonder this great state of Louisiana cannot boast of even a modest State hospital for tuberculosis, but is dependent for the treatment of thousands of tuberculosis patients upon two camps, one tuberculosis department of a general Charity Hospital, and one private sanitorium, a total of about 200 beds.

The physician is the potential medium through whom the knowledge of the various complex measures necessary for the eradication of tuberculosis can be properly and efficaciously placed before the lay public.

But what if this physician is not well versed in the principles and in the application of these measures?

There is no reason why, if some of us older men in the profession have not kept step with the advanced guard that we cannot now show a greater interest in tuberculosis and try to infuse into our younger medical students and confreres some of the interest and

*Read Before the Louisiana State Medical Society, April 24-26, 1923.

knowledge which Trudeau, Brown, Baldwin, Pottenger, Minor, Krause, Von Ruck, and many others have so religiously given us as a sacred heritage in the battle against this scourging enemy of mankind. Allan Krause especially strikes the key-note in remedying this vexatious condition when he says, "Tuberculosis teaching in our medical schools demands attention and more active consideration." Its solution is the most pressing one before us today. Have you ever stopped to consider what it would mean if every year one of our several thousand graduates in medicine left school with some interest in tuberculosis, with some idea of how to make a diagnosis, with some judgment of what to do with the patient once he labelled him? Only those connected with tuberculosis institutions know how difficult it is to procure the assistance of a young physician who has acquired sufficient instruction in Phthisiology and Phthisiotheraphy. How still more difficult it is to even interest the young practitioner in this branch of medicine. This inertia can be aroused if the medical student and practitioner have as incentive, the conviction that the study of tuberculosis in all its phases is not so easy and not so dry and uninteresting. The student of tuberculosis has a large field for study and research, and has the same right to aspire to the possibility of ultimately attaining a position of dignity and influence as well as the Internist, Pediatrist, Neurologist, Laryngologist, Surgeon, etc.

It is encouraging to note that the Public Health Service is making every effort possible in order to secure proper material and teaching facilities in tuberculosis. Within a few years this department will develop most competent men, capable of thoroughly and skillfully handling the burdensome and expensive problem of tuberculosis in the army.

How can we make it interesting for the one who wishes to enter this field of work?

By impressing upon him the fact that he requires something more than the mere use of the Stethoscope and X-ray in the diagnosis, and "Climate" for treatment, in order that he may achieve some perfection in the early recognition of the disease, and acquire results that will be emboldening and lasting.

The making of an early diagnosis of tuberculosis is not a simple matter and is paramount to the attainment of satisfactory and favorable results in treatment. The sooner we recognize the folly and danger of making a diagnosis of tuberculosis solely upon the stethoscopic findings, or the reading of an X-ray plate, or the extent of a positive tuberculin skin reaction, the greater will be our chances to form final conclusions that will be unmistakable.

It is only after a careful notation and complete analysis and study of the family and personal histories, of the clinical symptoms, of the physical findings, of the X-ray plates, of the blood pictures, of the sputum, of the tuberculin reactions, etc., that we can arrive at some positive decision in diagnosis, and thence obtain a clear conception of the tuberculous state of a patient.

How many are labelled tuberculous who have not even the slighest infection? How many go to an early grave because of the failure to properly diagnose the disease in time? It is imperative on our part before accepting the serious responsibility of advising and treating any tuberculous subject to be thoroughly familiar with the following:

1st. The infectiousness of the disease, and the various degrees of infection which different patients will manifest.

2nd. The anatomic changes with resulting physical and clinical findings.

3rd. The relative value of signs and symptoms in ascertaining the disability in the individual case.

4th. The technique in arriving at a correct diagnosis.

5th. A relative idea of what to do with the patient after he has been classified as tuberculous.

6th. The relapsing nature of tuberculosis.

7. The often overlooked fact that each patient must be considered as a personal entity, and his mode of living and course of treatment directed only after a full and complete study of his family, social and economic conditions.

The tuberculous with no "Activity" requires advice and observation, but the slightly "Active" and very "Active" tuberculous require more rigid and ag-

gressive care and treatment.

It is not fair to include all tuberculous in the same class, for if we do so we may disrupt the happy home of an "Inactive" tuberculous, while we may in another instant allow the "Active" and "Progressive" tuberculous to walk and work himself to a premature death.

With the "Active" tuberculous we must devote all efforts to combating the existing "Toxemia," and also the depletion and consumption of the body's tissues. We must thrive, regardless of sacrifice to the patient to attain a "mode of living" by which we will reduce to a minimum the exhaustive and destructive effects of the invading tubercle bacilli upon the vital organs.

The "arrest" of tuberculosis will depend upon the power and action of the body's resistant forces, i. e., the phagocytic and antibody function of the Leucocytes, and the reactive and reconstructive ability of the blood and fixed tissue cells.

In the treatment of tuberculosis, the Basic or Hygienic-Dietetic Treatment, consisting of Rest, Diet and Open Air furnishes the main weapon in the combat for supremacy between the foe's poisonous and destructive effects, and the resistance of the body cells.

To overcome the "activity" of the disease nothing approaches in value to rest. As Lawrason Brown so emphatically stated in a lecture at the New Orleans Charity Hospital, "If I were given the choice to pick out but one of all the different measures advocated in the treatment of tuberculosis, I would select rest." Yes, rest properly applied, rest both physical and mental, and rest until all signs and symptoms of "Activity" have completely vanished.

Next to rest, a good well balanced diet will be most efficacious in the upbuilding of the patient's debilitated condition. An exaggerated and excessive protein and fat diet of eggs and milk and various oils is unnecessary and sometimes detrimental to the tuberculous. Too frequent nourishment is injurious to the average tuberculous.

Three well balanced meals, five hours apart will meet the demands of metabolism in the majority of cases, whether they be "Incipient" or "Advanced."

An abundance of fresh air and sunlight, especially air free from dust, completes the quota for the Basic treatment.

Is the "arrest" of tuberculosis dependent upon the patient living in a high altitude climate?

Most Phthisiologists agree to the fact that "Climatic Treatment" is the least essential for the "arrest" of tuberculosis, and that lasting and permanent results can be acquired in any climate.

A report of the survey of the Public Health Service of conditions in the southwest, which investigation showed that nearly fifty per cent of the tuberculous died within six months of arrival out West, certainly is not corroborative and not very convincing of the value of a high altitude climate.

From a scientific standpoint nothing has proven the value of a high-altitude in the treatment of tuberculosis.

As one author states "The scientific arguments presented for climate have not held water."

It is unfortunate that the Medical Profession has placed so much reliance in the curative value of climate, for it has been a formidable barrier in retarding the construction of many Hospitals and Sanatoriums in lower altitudes, and has prevented the application of many important Anti-Tuberculosis measures.

Alas! it takes more than the climate treatment to permanently "Arrest" the "active" tuberculous.

We know that even the Basic Treatment will not alone be sufficient to cause an "Arrest" in the majority of cases of Pulmonary Tuberculosis.

In the cases that will not yield to the Basic Treatment we must reach further and apply "Accessory Measures" of treatment which will gradually and persistently aid in the stimulation of the resistant and reconstructive forces of the body, and thus favor a healing that will be permanent.

Among the "Accessory Measures" of treatment, the Tuberculins (especially Koch's Bacilli Emulsion and Old Tuberculin) carefully administered by the clinical method or gauged according to the fluctuations of the Neutrophilic Index, have beyond the author's doubt, given encouraging results in bridging over many patients to a permanent recovery. During the past twenty years, a large number of Office and Sanatorium cases who persevered in their

treatment until discharged, and who received Tuberculin as an accessory, showed that relapses among such class of patients were practically nil.

Many of these cases have ceased to react locally and constitutionally to the Tuberculin Tests and apparently have attained a permanent healing by fibrosis.

Tuberculin is not administered solely with the view of increasing the specific antibody action of the leucocytes, but is given chiefly with the object of stimulating the bone-marrow and other cells in their formation of new leucocytes, thus producing an accumulation of a larger number of leucocytes in the tissues bordering the tuberculous lesions.

Such mild "focal reactions" reenforce the "phagocytic" function of the leucocytes, and affect the diseased areas by promoting the absorption of infiltrations, tubercles and disintegrated material which are finally replaced by new connective tissue resulting from the reconstructive power of the leucocytes and the proliferation of the fixed tissue cells. Besides the Tuberculins, such other medication as Creosote, Iodine, Heliotherapy, Etc., have their claim in the "accessory" treatment when indicated.

Artificial Pneumothorax, a much overlooked and neglected measure in this part of the country, and a valuable "accessory" in the treatment of tuberculosis, has certainly a firm and well established stand in the relief of the septic and hemorrhagic tuberculous.

Included as a most potent 'accessory' is the remedying and correction of all conditions and defects that tend to lower the body's resistance: such as a disturbance of the digestive tract, the presence of non-tuberculous focal infections, physical and mental defects, improper heart's action, secondary anemia, etc. All such conditions must be carefully looked into before one can outline a course of treatment, regardless of the fact whether the tuberculous condition is "Active" or "Latent."

Finally let us not forget that Time, "The great healer of Nature", or, in other words, the duration of the patient's treatment is a measure upon which the consumptive's permanent recovery is largely dependent.

Relapses in Tuberculosis have been a taxing factor to the Phthisiologist. The study of post-results of treatment show that the average patient discharged from the Clinic, Sanatorium or Hospital has about one chance in two of living five years; one in four of living ten years; one in seven of living fifteen years, and three chances out of one-hundred in favor of a recovery, if the patient is still "active" when discharged.

These figures prove most conclusively the fallacy and waste of labor and money to attempt an "arrest" in the "Incipient" tuberculous within less time than six months to a year; in the "Moderately Advanced" within eight months to two years; and in the "Far-Advanced" within one year to three or more years.

This appalling number of consumptives discharged yearly to relapse and die, forcibly places before us the necessity of advocating something more effective than the mere building of palatial and expensive Sanatoriums and Hospitals where patients are simply boarded and lodged, and allowed to remain for only a limited period. Our Home, Sanatorium and Hospital cases —Incipient or Advanced—must be given every advantage and facility to carry out the Basic Treatment, and should also receive the benefit of any "accessory" treatment upon which improvement or "arrest" of the disease will depend.

Every patient upon discharge must be urged and commanded not to overthrow all restrictions and care before he has been positively assured by his physician, that all lesions have been radically healed, and that the taking up of the ordinary trend of life will not lead to a relapse.

All discharged patients whose financial condition does not permit them to follow a careful life should be taught the need of Post-Sanatorium and Post-Treatment care. Colonization, Social Reestablishment, Vocational Training, Etc., all tend to the betterment of the consumptive and will keep the discharged patient in a fit condition to warn off any relapse.

These measures are of vital interest to the physician, but concern with the same responsibility our Legislators, Health Authorities and Social Agencies.

Conclusions:

1. The arousing of the Medical Profession's greater interest in Tuberculo-

sis, and the procurement of better facilities for the instruction and study of the disease are tantamount to a greater success in the eradication of the White Plague.

2. The diagnosis and treatment of tuberculosis are not facile, and require our assiduous attention and matured consideration.

3. The relapsing nature of tuberculosis forcibly impresses upon us the necessity for the immediate construction of the many institutions so vitally important to the indigent consumptive.

4. That the perseverant and successful worker in Tuberculosis is well qualified to bear the plam: Palmam qui meruit, ferat.

DISCUSSION.

Dr. John F. Buquoi (Covington): Fully 90 per cent of the cases, incipient cases, of pulmonary tuberculosis pass through the hands of the family physician, and upon him rests the serious responsibility of its early recognition in order to determine the manner in which treatment may be instituted. The average medical man after graduation possesses rather meagre knowledge of physical diagnosis; proficiency in that line is acquired only after years of arduous labor and practice, and we physicians from the country are further handicapped in being deprived of the refined methods of examination enjoyed by our city brethren.

I agree with the doctor in claiming that the diagnosis of incipient tuberculosis is an no easy matter. No matter how proficient a man may be, he cannot diagnose a case by stethoscopic findings, X-ray findings, clinical symptoms, or temperature reading alone. Evidence obtained from such data should be used collectively to be of any use. After the disease progresses to the extent that destructive changes take place, the diagnosis is comparatively easy.

If the patient is found to be tuberculous, then the next thing is treatment. We are all thoroughly convinced that the fundamental elements of treatment are rest, well-balanced diet and climate. While on the subject of diet I would like to say a word of admonition. A number of cases are sent to our section of country in quest of health. The majority are moderately advanced, and are told by the physician at home "Go to the ozone belt, eat a good many eggs and drink as much milk as you can, and you will improve." This advice very often leads to disaster. After taking this excessive protein diet for a period of a week or so we are usually called in to treat a most violent attack of autointoxication, leaving in its wake the digestive organs seriously impaired. In this particular, very frequently the prognosis hinges on the fact that the patient must build tissue faster than the disease consumes it. Sometimes other measures are needed besides the basic treatment. Drugs should be limited, and only used when thoroughly indicated.

Dr. E. A. Bertucci (New Orleans): While the treatment of tuberculosis is an old subject, it is one of the most important that the internist has to deal with. Unfortunately, we have no specific chemical, botanical or physical agent that has a selective action on the tubercle bacillus, nor have we any therapeutic agent that will enhance tissue resistance, against the ravages of sclerosis of the affected area.

I believe the successful treatment of tuberculosis primarily lies in one important factor, and that is the early recognition of the disease. While we agree that the diagnosis of early disease is difficult, yet we can at least strongly suspect the disease from the various early symptoms, and therefore when we find signs in the chest by a thorough physical examination, we can then institute our treatment.

Most of these cases, unfortunately, come to the internist beyond the early stage, but when they come to us with symptoms, probably pointing to an obscure condition, we must try to find out the underlying cause of such condition by a routine examination of the chest, and there, in a great majority of instances, probably reveal trouble in the chest, and if found, then we can institute early treatment. Of course if these people have treatment early enough, the disease would never reach the advanced and hopeless stage.

Dr. A. A. Herold (Shreveport): The essayist and discussant come from the southeastern part of Louisiana, and I, representing the northwestern part of the State, wish to say that I think we ought to be grateful that a man of Doctor Durel's experience and ability had read a paper before our Society on this subject.

As you may know, we have a modern institution for the treatment of tuberculosis about eight miles out of Shreveport, where we have gotten remarkable results, not so much in curing patients, (although we have some arrested cases) but in the education of the tuberculous and their families. Unfortunately, we have to take some advanced cases at times, and they are the ones that keep the beds occupied.

As to the diagnosis, I believe I might say there are four methods in adults—correct history, thorough physical examination, X-ray, and the sputum. The last is the exception, not the rule, because very seldom do we get a case that shows the tubercle bacillus in the sputum that is not too advanced to accomplish much. However, we know that a mixed infection, especially the streptococci combined with an excess of lymphocytes, is a danger signal.

I want to heartily endorse what the doctor has said about diet. A few years ago the idea was to increase the weight, but now we know it is a bad thing to gain too much weight because very often it is a adipose tissue, which has no resistance, and there is more danger of complications.

Another thing, when we examine a tuberculous patient we should not over look anything. Be on guard for diabetes because we know it is often a complication.

I feel like Doctor Durel about climate, so much so that we advise our incipient cases to

first try treatment at home with rest, fresh air, proper feeding, and if after a limited time the patient is not making satisfactory progress, then we advise them to go to a drier, but not necessarily a higher, climate. I recall one case I had a few years ago in which we got an apparent arrest and the patient was feeling fine, free of fever, and yet we found the tubercle bacillus constantly present in the sputum, with numerous moist rales. She finally went west, and under favorable conditions she had the affected lung collapsed with artificial pneuothorax, she has apparently gotten complete arrest. She has been back home on visits.

Doctor Durel has not mentioned the autogenous vaccines, and we have seen some good results in moderately advanced cases. Whether that is due to protecting the patient from scavenger germs, or whether to the non-specific protein therapy, I am not prepared to say.

Doctor Durel has mentioned drugs, and I quite agree with him that there is not much reliance to be placed on them. I would like to ask if he has had any experience with nascent chlorine treatment, which I have seen in at least one case do a remarkable amount of good.

Dr. L. Von Meysenbug, (New Orleans): I want to emphasize one point brought out by Doctor Buquoi in his discussion and that is the danger of high protein feeding in the treatment of tuberculosis. Two or three years ago Dr. McCann, working at Bellevue Hospital, New York, showed, after thorough investigation and study of the basal metabolism, that high protein diet was only not indicated, but was actually harmful in the treatment of this condition. Dr. McCann went very thoroughly into the metabolism of the normal and also of the tuberculous patients, and the result of his work was as I have stated.

Dr. J. G. Dempsey (New Orleans): The question of tuberculosis to the average medical man is a "passing show." There is no doubt that the educational work done by the Tuberculosis League, with the assistance of institutional work and some institutional work done by individuals like Doctor Durel has been very important. Dr. Durel deserves a great deal of credit for carrying on this institutional work without a great deal of assistance or much cooperation. He has struggled along here for twenty years, and there is no question in my mind that we are in our infancy in the study of tuberculosis, and that we will at some time through some channel, gain the point that we are striving for. If you take into consideration the State of Louisiana and the number of tuberculous cases here, and what we have done, it is positively a disgrace. Think of the many institutions in our State, and how little attention is given to tuberculosis. Other States have hospitals for the tuberculous, and in every hospital a department for the treatment of tuberculosis. We need in the City of New Orleans and in the State of Louisiana, a modern institution for the care of tuberculous patients, equipped with the necessary buildings to carry on not only curative measures, but the industrial side of tuberculosis. We need a modern laboratory for scientific research work. We need a modern X-Ray department where this work can be carried on intelligently.

You may be surprised to know that the reports from Louisiana show 2063 cases reported in 1921, and 2052 in 1922. In New Orleans alone 651 cases in 1921, and 664 cases in 1922. This shows a small advance, but when you look down the list and take influenza you will find that many cases of tuberculosis died as influenza and have been diagnosed as influenza, and that accounts for the reduction of the number of cases of tuberculosis in the State. I might say in passing that we had 171 cases of influenza in 1921; 392 cases in 1922. In New Orleans 54 cases in 1921; 86 in 1922, showing conclusively that many of these cases called influenza have evidently had tuberculosis. Therefore let me say that as long as it is within the power of the medical men of the State of Louisiana, they ought to be the first to encourage treatment and care of our tuberculous cases. Gentlemen, it is very, very important.

J. A. Storck (New Orleans): It is trite to say that Tuberculosis should be anticipated, and that "prevention is better than cure." It is, indeed, difficult to anticipate Tuberculosis, but there are manifest phenomena often accompanying early invasion of the organism into the human body which deserves close observation. When, in addition to being tired, irritable, "run down", with a slight fluctuation of temperature, the patient presents the habitus enteropticus, a careful medical survey should be made of all young adults. This is advisable, especially in regard to those complaining of alimentary disturbances, and particularly when these disturbances are referable to the stomach. A follow-up of this class of cases yields important results, i. e., patients are found later to have easily recoznizable tubercular diseases.

It should be our endeavor to give patients an early chance, and, when possible to warn them before Roentgenoscopy and the finding of the tubercular bacilli in the sputum tells the story.

Dr. J. W. Durel (New Orleans) closing): As to the question of diagnosis, I tried to lay special stress upon the point that we may be absolutely deficient in making a diagnosis of tuberculosis, if we depend upon any one clinical, physical, or laboratory finding. In other words, some of us belong to the school placing great importance upon the temperature record, and depend upon the latter for a final diagnosis of tuberculosis. Some rely exclusively upon the X-ray findings, and some upon the extent of a tuberculin skin reaction. Now, to arrive at a correct diagnosis of tuberculosis we must combine all the facts acquired in the case, i. e., the family, personal and clinical histories; the physical chest findings; the X-ray readings; the sputum analysis; and, in the absence of a positive sputum—the intra-cutaneous tuberculin tests, and sometimes the compliment fixation test.

But how can we say positively whether a patient has a tuberculous infection or disease, if we cannot find tubercle bacilli in his sputum? To my mind, only when the data

in hand is corroborated by a positive reaction to the intra-cutaneous and sub-cutaneous tuberculin tests, or a positive compliment fixation test, as preferred by some.

For example: Last year a patient was referred to Breaux Building from another ward of the Charity-Hospital, and his record showed tubercle bacilli in the sputum, and also the constitutional symptoms and signs of pulmonary tuberculosis. I examined him and accepted his in the T. B. department. He improved wonderfully and was apparently well in six weeks. After being discharged he returned to the hospital with a complaint of not feeling well. We took him back, but he became so impertinent that he was dismissed to be readmitted again by the admitting physician. His behavior was such after this, that I refused to pay any attention to the case. A year later he complained of a pain in the left Iliac region, and I had two or three surgeons in consultation, with the result that a diagnosis of a "cold" abscess was made.

He died a few months later, and upon autopsy there was not a single tubercle found in his body, and the "cold" abscess turned out to be an aneurysm of the left Iliac artery. Yet, this case occupied a bed in the tuberculosis department for a year and a half. You might say that this was a faulty diagnosis, but when we consider that the surgeons saw this case in a Tuberculosis Hospital, and that we did not make any further attempt to determine the tuberculous nature of the subject after receiving two reports of positive suptum, there is an excuse if we did not properly diagnose this case. No, I did not administer the tuberculin tests in this case because, at that time, the Charity-Hospital did not furnish our department with a supply of tuberculin and I did not intend to waste my individual supply of tuberculin on a patient that came to my department with a report of a positive sputum.

This case was an act of Providence for now the Charity-Hospital furnishes me with all the tuberculin required.

As to the autogenous vaccines, at the last meeting of the Southern Medical Association, all agreed to the fact that the autogenous vaccines play an almost insignificant part in the treatment of tuberculosis.

As for the stock vaccines they are valueless and should not be used at all. I have had no personal experience with nascent chlorine or the calcium salts, but I should not doubt that any irritant to the bronchial mucous membrane would stimulate and cause some fibrosis about the tuberculous lesions.

I want to thank Dr. Dempsey for his well meant remarks, especially his statistics from the Board of Health.

In treatment we do not want only to fatten our patients, but our main object in view should be to keep them well and to eradicate the disease entirely. We also should be sure that a patient has tuberculosis before we label his as such. I remember the first three patients sent to my Sanatorium eighteen years ago when I first started in this line of work.

Competent and older men had previously diagnosed two of them as advanced cases of tuberculosis. I was young then, and felt that I should not contradict my older confreres. These cases had all the physical and clinical findings of pulmonary tuberculosis, but did not have tubercule bacilli in the sputum.

However, these patients improved rapidly, and one was well in three months. To-day I realize that neither had tuberculosis, and that it was a matter of a mistaken diagnosis: due to the fact that in the absence of tubercule bacilli in the sputum, there were no pathognomonic evidence of tuberculosis. I did not use the tuberculin tests at that time.

We know today that 30 per cent of cases in Tuberculosis Sanatoriums and Climatic resorts are cured so easily because they do not have tuberculosis. When one is dealing with an "active" tuberculosis it is another question, and a permanent recovery is not attained so easily.

I cannot believe in the value of any climate, because of the experience we have had in Louisiana and at the Charity-Hospital..... Right over there, at the Charity-Hospital, next to the gas tanks, the results acquired are equal in importance to those reported from anywhere else in America.

New Orleans Medical and Surgical Journal

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EDITORIALS

THE FAMILY PHYSICIAN

Much has been said and written about the passing of the family physician, but recently the pendulum has swung in the opposite direction indicating a return of appreciation of the old time country doctor. We all remember him. He traveled on horse-back, in a closed coupe, a buggy or a two wheel cart. He was prepared to make thorough examinations and perform surgical operations in emergencies and was usually successful. He had the love, esteem and respect of every individual in the community. He was a leader among men and the idol of the women and children.

The *New York Tribune* pays him a tribute, quoting from Dr. Frankwood E. Williams, medical director of the National Committee for Mental Hygiene: "It is pleasant to hear a physician with a specialty praise the old-fashioned family doctor, the 'general practitioner' who has largely given away in the city to specialist, but in the country is, as ever, the present help in time of trouble. For him there are gratitude and affection that need no analysis. He may be old-fashioned, but he is as able a psychologist as the most modern. The best remedy in his medicine chest is common sense, which tactfully applied is a famous way of mental healing. His best dose is optimism. That is what all four patients out of five need. Only the fifth patient needs the specialist and the family doctor in general may be relied upon to take such cases to consultation."

The *Tribune* concludes, "There is no danger of disparaging the skill and knowledge of the physicians and surgeons who are masters in specific fields; but it is good to be reassured that the family doctor, until lately the backbone of the profession, is by no means obsolete."

OUR MEDICAL SOCIETIES.

The Louisiana State Medical Society is making for itself a history that will be enduring and of which the profession of the State may be justly proud. Its transactions for many years contain a fund of information, both historic and scientific, that is of great value to the present generation of doctors, and will be transmitted by coming generations with pride to the generations to follow.

What the State Medical Society is doing should be done by every Parish Medical Society. Each society should preserve its transactions, including messages and reports; scientific, medical and biographical papers; have them written on uniform paper before receiving them as contributions, and have them bound in creditable style, letting each year's proceedings add a link in the chain of history.

A book of portraits of members, and one for the dead, would add interest to the record. In other countries this is considered an important part of the record.

DIAGNOSTIC FACILITIES.

There seems almost a consensus of opinion that diagnostic clinics and emergency hospitals should be established for the convenience and protection of those in need of quick service and for those who are unable to trave

to the Charity Hospitals or other institutions located in the principal cities of the State.

Hospitals are no longer places for the destitute, as they were when first established. They are recognized now as the place where the seriously sick, whether rich or poor, can be properly treated. The success of every hospital even in the smaller towns is evidence of the public confidence in institutional care. The community recognizes its value as a protective agency, and the individual as a place where disease is studied and the sick person properly cared for. If the hospital does not meet these requirements it is not properly operated and is a menace instead of a blessing.

SUSCEPTIBILITY OF MILK TO ODORS.

The susceptibility of milk to odors is universally known, yet many dairymen employ powerful disinfectants in and about the dairy and milk room. There is a good example of this given in the history of a large dairy in Copenhagen. Complaint was made that the milk tasted of carbolic acid. The milk from the farms was examined separately and it was found that 500 quarts smelled and tasted so strongly of carbolic acid that it was condemned. Not until the fifth day was the milk free from taint. It was found that the stable was cleaned and disinfected with a 2 per cent solution of carbolic acid to which was added a small amount of chloride of lime. The stable had to be aired two days before it again could be used.

COOLIDGE OR BANTING?

The thirtieth president of the United States and our sixth "accidental president", Hon. Calvin Coolidge of Massachusetts, is described as a quiet man, of retiring disposition, but a thinker with grim determination to act, and to act thoroughly and effectively, when the occasion arises; in other words, his reputation has been built upon deeds, not words. It is to be hoped that his handling the reins of our government will be along similar lines, well thought out.

Up in our neighboring country of Canada, there lives a modest, unostentatious physician, whose past does, in a great many ways, resemble that of our new chief executive. Dr. Frederick G. Banting was little known beyond the confines of his home in London, Canada, until, thru his ideas and perseverance, the blessings of "Insulin" was bestowed upon the world, with its millions of diabetics. Dr. Banting had served creditably in the World War and had retired to his humble home, with a certain feeling of unrest; he wished to accomplish something. Altho a surgeon by choice, he was not so successful in this specialty and finally accepted a position in the department of physiology of the University of London, Can.; it was there that he evolved his ideas about isolating the internal secretion of the pancreas, free from the enzymatic substances and proteids. After a thorough discussion with Prof. Macleod of the University of Toronto, his alma mater, he learned that he would have to give up all else and devote his time and energy exclusively to this one subject; he decided to do this and plunged into the experiments and, undaunted by Collip and Macleod, finally completed the task, which has given him an international reputation. He has conferred an incalculable gift upon mankind and his discovery ranks along with Pasteur's, Koch's, Lister's and Behring's.

The policeman's strike in Boston gave Calvin Coolidge the opportunity, which he took advantage of and became famous; had he handled the situation otherwise, his public career would, very probably, have ended with the Governor's chair. Frederick Banting forced the issue, which has made him famous; had he failed, we most likely, would never have heard of him. The analogy ends here, however, for Mr. Coolidge will yet make or break his reputation; he may go down in history as a great president, as a mediocre or as a poor one. But, Dr. Banting's place in history—at least, in medical history—is already assured; he may yet do other work and add to his laurels; but, he can never erase his high standing, even if he accomplishes nothing else.

* We have heard lawyers say that they would rather be chief justice of the U. S. Supreme Court than president; we could not understand. However, now we understand, for we feel that we are voicing the feelings of a large majority of the medical profession when we say that we would rather be in "Banting's shoes" than in Coolidge's.

PROCEEDINGS OF TOURO INFIRMARY STAFF

New Orleans.

APRIL 11th, 1923.

Dr. C. A. M. Dorrestein:

I wish to present to you tonight two cases of ruptured hemorrhagic cysts of the ovary which occurred in my service in this Institution during the month of January of this year. These cysts are *not* of the type described by Sampson.

Novak classified the ovarian *hema*tomas under three groups to which according to Sampson a fourth should be added.

The groups of Novak are: 1st, follicular; 2nd, stromal; 3rd, corpus luteum, and the 4th, of Sampson, comprises those cysts lined wholly or in part by endometrial tissue.

The Pathological Department classified the cysts in these two cases: the 1st, as a corpus luteum cyst, and the 2nd as a follicular cyst.

Both these cysts contained the dark colored hemorrhagic fluid of the chocolate syrup type described by Sampson in his monographs in the Archives of Surgery of September, 1921, and the American Journal of Obstetrics and Gynecology, November, 1922.

The Pathological Department report does not contain any reference to endometrial tissue or implantation Fallopian Epithelium, so we must conclude none was found.

These cysts are densely adherent to the surrounding structures especially the posterior leaf of the broad ligament, the intestinal mesentery and the lateral walls of the uterus.

These adhesions are explained by successive ruptures of these cysts and the irritating effect of the chocolate material on the pelvic peritoneum causing matting together of contiguous peritoneal surfaces wherever this fluid comes into contact with them.

If rupture occurs lacerating a fair sized vessel in the ovarian substance the resulting intra-peritoneal hemorrhage may be so great as to simulate ruptured extra-uterine pregnancy with serious symptoms and even fatal results unless the abdomen is promptly opened and bleeding checked. A case of this kind came under my observation sometime ago when a young woman was admitted with a diagnosis of internal hemorrhage. Upon abdominal section the peritoneum was found filled with blood for which no other cause could be found than a ruptured hematoma of the right ovary.

The immediate results of a rupture of a hemorrhagic cyst are those of an irritating pelvic peritonitis, viz: pain, fever, abdominal rigidity and distension, nausea and vomiting, leucocytosis.

The remote results are those of adhesive inflammation in the pelvis, matting together of the pelvic contents, dysmenorrhea, sterility.

The diagnosis is sometimes quite difficult especially in virgins. A right sided rupture presenting very much the picture of an acute appendicitis. The nearest I could approximate the true condition prior to operation in the first case was by a tentative diagnosis of pelvic peritonitis possibly of appendiceal origin. While it was noted that this patient had begun to menstruate a day before the onset of the last attack, this was thought to be a coincidence.

It is interesting to note that several of the cases in Sampson's series had a diagnosis of chronic appendicitis in addition to pelvic peritonitis.

Case No. 1—Miss L. L., age 28, single, native of this city, with unimportant family history, had had repeated attacks of right sided abdominal pain with constipation. Indiscretions in diet were followed by pain in right side of lower abdomen and vomiting. On December 30th, 1922, patient began to menstruate and was taken ill again with vomiting spells, vomiting several times and not food. Her temperature ranged from 100-103 with abdominal rigidity which was very marked over the lower abdomen. The leukocyte count on Sunday was 13,000 with 80 per cent polys. The lower abdomen was rigid and board like. A diagnosis of pelvic peritonitis was made, possibly due to appendiceal inflammation. Monday morning her temperature was normal, but during the day, Monday, she vomited several times, though on a water diet. Monday afternoon, at 4:00 p. m. her temperature was 101 and ris-

ing, pulse 122 and rising, and there was an area of intense tenderness over McBurney's point and a general tenderness over the lower abdomen with sharp intermittent colics which she described as gas pains. Removal to the Touro was decided upon.

Pre-operative diagnosis: Pelvic peritonitis, possibly of appendiceal origin.

Operation: The abdomen was opened through a right rectus incision and an enormously distended cecum presented. The peritoneal coat was very much injected and irritated showing unmistakable signs of acute peritonitis. It was at once seen that, though the appendix was curled and adherent to the posterior parietal peritoneum, it was not the cause of the touble. Considerable difficulty was experienced in removing the appendix. One-half dozen curved clamps were required for the meso appendix alone. It was finally ligated, cut off with cautery and inverted with pursestring. Further exploration then revealed that the trouble must have been in the lower pelvis as the upper abdominal contents were normal, and the intensity of the peritoneal injection increased as the search went downward. A general pelvic peritonitis was evident as the rectum, uterus and coils of small intestine were matted together by plastic exudate. As there was a large cyst on the left side which could not be reached except by the finger tips through a right rectus incision, this was now closed and a median incision made with the patient in Trendelenburg position. This showed the sigmoid even more distended than the cecum. The cause of the trouble was found to be a ruptured hemorrhagic cyst the size of an orange, the contents of which had spilled and filled the pelvic cavity. This was all removed and the left ovary and left tube removed and bleeding points ligated. The raw surface of the broad ligament, posterior leaf, where the cyst had been adherent was controlled by suture and ligatures. The right tube was found to be very much enlarged and injected and was amputated. The right ovary which did not appear to have suffered much was left in. A rubber drainage tube, fenestrated, was inserted down to the bottom of the cul-de-sac and brought out through the anterior abdominal wound. The midline incision was closed in the usual manner, excepting that the skin was closed with interrupted silk worm gut. Drainage was removed in 48 hours. Post operative recovery uneventful.

Report of the Pathological Laboratory: Right tube about 8 cm. in length, irregular in shape, about 1 cm. in diameter at the thickest portion, dark red color with many tags of adherent tissue. In one tube these is a mass about the size of a small walnut which is irregular in shape, firm in consistency, dark red color, shows marked congestion of vessels. This mass apparently ovarian tissue consisting of two small cystic areas which are filled with blood clot, and of a grayish dark red color, firm in consistency and has a few areas which are hard and nodular. Upon sectioning the tube, the lumen of the tube yields a small amount of bloody material and the walls are somewhat thickened and congested. There is also present a piece of tissue which has been sectioned and apparently a cyst. The inner wall is smooth, glistening and shows marked congestion of vessels. There are also present a few pieces of tissue of a dark brown and mottled in appearance. Not very firm in consistency and upon section shows nothing characteristic.

Left ovary and tube held together by many adhesions. The left measures 8 cm. in length, is for the most part small and shows evidence of much congestion. The fimbriated end is closed. The ovary which was apparently cystic has been opened. Outer surface is pale and white in some areas while others are dark and mottled. The inner surface of the organ which has been opened is very rough and granular, shows marked congestion of vessels. There are a few blackish areas disseminated throughout the entire inner surface. These areas are not definitely outlined. Upon section, the cystic areas yield a small amount of clear fluid while the wall of the cystic tissue is very rough and leathery in appearance. There is some evidence of congestion in the walls.

Appendix: 7 cm in length, dark red color, somewhat flaccid. Upon section shows the lumen yields a bloody exudative material among which are small fecoliths. Walls and mucosa are markedly congested and thickened.

Diagnosis:

Sub-acute appendicitis, Sub-acute-salpingitis. Cystic Ovary (Follicular)

Case 2—Miss D. D., age 23, native of this city, had been complaining over a year with constant pains in the right side and dysmenorrhea. Appetite good. No digestive disturbances. Bowels constipated.

Nocturia for last two weeks. No frequency or urgency. No burning. No cardiac or respiratory symptoms.

She had retired and was asleep when awakened by violent pains and nausea. She had also had a chill and vomited several times, was given an opiate and has had no pain since. Abdomen is tender and rigid.

A diagnosis of ruptured hemorrhagic cyst on the right side was made and patient removed to Touro.

Operation-Midline incision. The parietal peritoneum was very dark as if the abdomen contained free blood. This however, was not found to be correct, but the coloring was due to the absorbtion by the omentum of the coloring matter contained in the ruptured cyst contents. In Trendelenberg position, all adhesions in the pelvis, which were numerous, were loosened and a right salpingo-oophorectomy done. The left tube and ovary were loosened up as they appeared to be only suffering from irritating contents in the pelvis. After securing 2 or 3 points in the broad ligaments by ligature, all oozing was practically checked. The appendix was removed. A rubber dam drain was introduced.

Laboratory Findings:

Appendix 7 cm. in length, dark red color, very granular and rough shows marked congestion of all vessels. Upon section the lumen is found to contain a large amount of bloody exudative material among which are small fecoliths. Walls and mucosa are markedly congested and thickened. Ovary and tube held together by many adhesions. The tube measured 8 cm. in length, is for the most part small and shows evidence of much congestion. The fimbriated end is closed. The ovary which was apparently cystic has been opened. Outer surface pale and white in some areas while others are dark and mottled. The inner surface of the organ which has been opened is very rough and granular, shows marked congestion of vessels. There are a few blackish areas disseminated throughout the entire inner surface. These areas are not definitely outlined. Upon section the cystic areas yield a small amount of clear fluid while the wall of the cystic tissue is very tough and leathery in appearance. There is some evidence of congestion in the walls.

Diagnosis: Acute and chronic salpingitis and peri-salpingitis, organizing blood clot in ovary. Hemorrhagic corpus luteum of left ovary (ruptured).

Dr. Dorrestein (closing): These cases were presented this evening first of all as interesting from a standpoint of differential diagnosis between the acute conditions in the female pelvis. Both cases presented alarming symptoms and had to be promptly decided as to what course of action had to be pursued. As stated, neither one of these cases while they were perforated hemorrhagic cysts were of the Sampson type. Sampson himself recognized the occurence of other hematomas or hemorrhagic cysts of the ovary perforating occasionally for while in his paper in the Archives of Surgery he used the term "perforating hemorrhagic cysts of the ovary" he writes in his monograph in the American Journal of Obstetrics and Gynecology as follows: I have discarded the terms "perforated hemorrhagic cysts" as applied to this condition because perforations may occur in other varieties of ovarian hematomas. I now refer to them as hematomas or hemorrhagic cysts of endometrial type.

These two cases show that perforations do occur in other ovarian hematomas as one was of the follicular type and the other of the corpus luteum type. Both these patients were under thirty and single girls. Both these cysts were unilateral (one left sided and the other right sided) while Sampson states that the cysts described by him were nearly always bilateral and occurred almost exclusively in women about thirty years of age.

NEWS AND COMMENT

Among those attending the A. M. A. Convention at San Francisco, from Louisiana:

Dr. Walter Brent.
Dr. Willis P. Butler.
Dr. W. F. Convillion.
Dr. G. R. De Laureal.
Dr. Oscar Dowling.
Dr. Charles R. Gowen.
Dr. G. M. G. Stafford.

From New Orleans:

Dr. P. Graffagnino.
Dr. Lucien Ledoux.
Dr. William H. Block.
Dr. Marcus Feingold.
Dr. L. A. Fortier.
Dr. B. C. Fry.
Dr. Amedee Granger.
Dr. Edmund Leckert.
Dr. Urban Maes.
Dr. Leonard C. Scott.
Dr. William H. Seemann.
Dr. Sidney K. Simon.
Dr. S. M. Blackshear.
Dr. T. J. Dimitry.
Dr. C. V. Unsworth.

Dr. Amedee Granger, New Orleans, and Dr. Charles R. Gowan, Shreveport received favorable mention for their Scientific Exhibit.

Dr. Urban Maes, New Orleans was appointed one of the three judges of the Scientific Exhibit.

Dr. W. H. Block and Dr. W. H. Seemann, delegates of the Louisiana State Medical Society, took an active part in the deliberations of the House of Delegates and served on several important committees.

Dr. Urban Maes, Secretary of the Section on Surgery, was elected Chairman of this Section.

Dr. Sidney K. Simon, Secretary of the Section on Gastro-Enterology was re-elected Secretary of this Section.

Dr. Oscar Dowling, New Orleans, Chairman of the Board of Trustees, will continue to serve in this capacity.

A total of twenty-four members of the State Society attended the convention.

We regret to learn at this writing that Dr. W. T. Patton, New Orleans, is seriously ill.

Dr. Lionel Bienvenu, Tulane 1920, Charity Hospital 1922, has removed to Opelousas, Louisiana.

The following New Orleans doctors have returned from their vacation:

Dr. L. Fortier.
Dr. T. J. Dimitry.
Dr. C. V. Unsworth.
Dr. S. M. Blackshear.
Dr. L. A. Dedoux.
Dr. D. N. Silverman.
Dr. Etta McCormick.

The regular meeting of the Jefferson Davis Medical Society was held in Welsh, La., July 31st, at 7 p. m. An interesting paper on "Ileo-Colitis" was read by Dr. Kreeger of Lake Charles.

After the business and scientific meeting, the visiting Doctors, their wives, and the members of the society were entertained at a luncheon by the Doctors of Welsh at the residence of Dr. R. R. Arceneaux.

On Tuesday, July 2nd, at Natchitoches, the Eighth Congressional District Medical Society was organized. Dr. S. J. Couvillon, Moreauville, La., Councilor for the District was present for the purpose. The following officers were elected: Dr. Carson R. Reed, Natchitoches, President; Dr. Kirby A. Roy, Mansura, Vice President; Dr. M. H. Foster, Alexandria, Secretary-Treasurer. Dr. W. W. Knipmeyer, Secretary of the Natchitoches Parish Society, served as Secretary-Treasurer pro tem and some fifteen paid up memberships were promptly recorded. Alexandria was selected as the next meeting place and the third Monday in August—being the 20th day of that month—was the date, to be held at the Baptist Hospital at 7:30 p. m. There will be a formal program and refreshments. There has been a sustained demand for the district organization thruout the parishes of Avoyelles, Rapides and Natchitoches for some time and it is hoped that physicians from all parts of the district will be interested and that they will attend the August Meeting.

"INSULIN."

Touro Infirmary, New Orleans, is one of the twelve hospitals in the United States among which has been distributed a recent gift from Mr. John D. Rockefeller, Jr., of $150,000.00 for the purpose of extending the knowledge of Insulin and of increasing the hospital facilities for the treatment of patients with Insulin. Of this fund Touro's share is $10,000.00 This amount is to be expended in such a length of time as is thought expedient by the recipient. The gift was made to Touro through Dr. C. C. Bass and the disbursement has been placed in the hands of a committee consisting of Dr. C. C. Bass, chairman; Dr. John D. Spelman, Superintendant of the Touro Infirmary, Secretary; Mr. Sim Weis, representing the Board of Trustees of the Touro Infirmary, and Dr. I. I. Lemann. In pursuance of the conditions of the gift a limited number of beds have been set aside for the reception of patients to be treated with Insulin. Necessarily these cases must be restricted to include only severe diabetics and with complications or diabetes in the young .

Before any patient is accepted for admission details must be sent as to the age and type of case and economic conditions of the patient. The Touro Infirmary cannot assume responsibilities for patients sent there without previous authorization.

Instruction for all doctors of this section of the country is provided free of all cost to them, and they are invited to come at any time and stay as long as they please, but it is considered that a week is the minimum time which should be divided to the purpose.

In addition to the in-door service, an out-door free clinic has been established to care for ambulatory cases.

Insulin is not to be sent either for pay or gratis to patients outside of the hospital or its clinic. Insulin will be furnished to patients under treatment for a limited period only when they are unable to pay for it.

Al inquiries should be directed to Dr. Lemann, Director of Diabetic Clinic, Touro Infirmary.

New Orleans, La., June 28, 1923.

The semi-annual examination of the Louisiana Nurses Board of Examiners was held in New Orleans and Shreveport, June 18th and 19th. Fifty-one applicants qualified as registered nurses.

The successful applicants are:

Misses Leona Anclin, Grace Bateman, Lucy Bryant, Catherine P. Carroll, Mrs. Phronia Carroll, Katherine Angeline Cleve, Bunnie Cooper, Madge Littleton Elliott, Mary Louise Ferrand, Eva Fletcher, Emma Floegel, Jeannette Margaret Fontan, Mrs. Gaynell McLellan Ford, Ethel B. Galloway, Francis Marguerite Gilmore, Minnie Elizabeth Gilmore, Angeline Rose Glaudi, Lela Hamiter, Mrs. Rose Belle Hodson, Camille A. Hyland, Sadie Johnson, Mrs. Viola M. Cancienne Key, Louise L. Landry, Agnes Hazel Lestage, Mrs. Anna E. Levine, Mrs. Helen Nason Lewis, Sadye Dorothy Lippman, Lillian Lee Lovejoy, Lilla McMillan, Mrs. Alma Sinclair Moak, Mrs. Jane Ory, Mary Ella Poe, Pearl Adeline Rook, Sister Calista, Sister Valeria Adelaide Kearney, Mrs. Laura Kee Slaughter, Ida Helen Smith, Rubie Smith, Nettie Clara Snyder, Minnie Louise Tolbert, Blanche Isabell Toups, Elizabeth M. Ummer, Mrs. Jesse E. Ward, Henrietta Warner, Mrs. Ethel M. Camp Yeates, Lois Marjorie Zear, E. Abercrombie Austin, Gertrude Noralie Baptiste, Thelma Athernears Scott, Verter Marea Siggers, Nanie Tarnsie Zeigler.

The Louisiana Nurses Board of Examiners is composed of the following doctors: John T. Crebbin, president; Joseph S. Hebert, secretary-treasurer; George S. Brown, New Orleans; Fred J. Frater, Shreveport; Robert W. Faulk, Monroe.

MEDICAL NEWS.

On May 15th, 1923, one of the most interested and well-attended meetings of the Fourth District Medical Society was held at Shreveport Charity Hospital. Between 65 and 75 of the most prominent physicians of North Louisiana attended this meeting.

The following was the program for the occasion:

2:00 p. m.—Call to order by the President, Dr. J. G. Yearwood.

Invocation—Rev. W. W. Holmes.

Words of Welcome—B. F. Roberts, City Attorney; Dr. L. H. Pirkle, President, Shreveport Medical Society.

SCIENTIFIC PROGRAMME.

1. Some Observations in the Practice of Children's Diseases; Dr. R. T. Lucas, Shreveport, La.
2. Report of Some Interesting and Unusual Cases; Dr. B. C. Garrett, Shreveport, La.
3. The Safest Procedure in the Removal of Prostate Gland; Dr. Barron Johns, Shreveport, La.
4. A Discussion of the Treatment of Diabetes Mellitus with Insulin; Dr. J. E. Knighton, Shreveport, La.
5. Some Observations On Venereal Statistics in Louisiana; Dr. Leonard C. Scott, A. A. Surgeon, U. S. P. H. S., New Orleans, La.
6. Vital Statistics From the Practitioner's Standpoint; Dr. J. Geo. Dempsey, State Registrar, New Orleans, La.
7. Scientific Exhibits; Dr. Chas. R. Gowen, Shreveport, La.

Announcements by the Secretary.
Adjournment.

EVENING SESSION.

7:30 p. m.—Dinner.

1. Clinics-Pathological and X-Ray Demonstrations; Hospital Staff.
2. Our District Medical Society; Dr. A.A. Herold, District Councilor, Shreveport, La.

Adjournment.

FOURTH CONGRESSIONAL DISTRICT.

On Tuesday evening, August 7th., the Shreveport Medical Society held their annual social session; this year, it was set upon the Youree Hotel roof. The affair was well planned, with an excellent menu, music and dancing and reflected creditably upon the chairman of the committee, Dr. E. L. Sanderson.

Most of the members of the society were present, with their ladies and other guests. The feature of the evening, however, was the presence of our State society president, Dr. Lester J. Williams, who journeyed all the way from Baton Rouge for the occasion. The speech making was very brief, being confined to President L. H. Pirkle of the local society, President Williams and Dr. Oscar Dowling.

These affairs are always highly enjoyable, especially as they displace the scientific meeting in the hottest month of the year.

Among the forthcoming important meetings of special societies is the annual convention of the American Roentgen Ray Society. This is to be held in Chicago with headquarters at the Congress Hotel, the time of the meeting being from Sept. 18th to 21st. A number of eminent foreign contributors will appear on the program, and the announcements indicate that treatment by high voltage x-ray will have a prominent place on the program.

REMOVALS—Dr. George A. Mayer, from 1109 Maison Blanche Building, to 811 Whitney Building.

DIED—During July, Dr. E. S. Barry, of Grand Coteau, La., aged 77 years.

STATISTICAL DATA FOR THE MONTH OF JUNE 1923, OBTAINED FROM THE RECORDS OF THE CITY BOARD OF HEALTH.

Births: Male, white, 259; female, white, 227; by physicians, 415; male, colored, 114; Female, colored, 110; by midwives, 295.

Total, 710.

Stillbirths, 48.

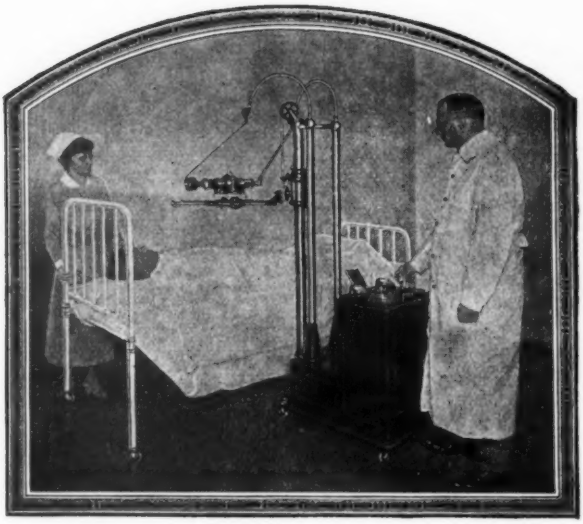
Cases	White	Colored
Diphtheria	1	0
Typhoid	1	1
Malaria	0	0
Scarlet Fever	0	0
Whooping Cough	5	1
Influenza	4	1
Measles	19	1
C. S. Meningitis	1	0
Tuberculosis	32	28
Deaths	**White**	**Colored**
Cancer	27	9
Apoplexy	31	8
Endocarditis and Myocarditis	5	2
Angina Pectoris	7	1
Other Circulatory Diseases	50	36
Bronchopneumonia	6	12
Lobar Pneumonia	3	5
Other respiratory diseases	..	1
Diarrhoea and Enteritis	12	15
Appendicitis	7	1
Other Digestive	7	6
Acute Nephritis	2	2
Chronic Nephritis	19	19
All other Genito-Urinary Diseases	4	10
Puerperal State	4	4
Malformations	3	3
External Causes	28	17

Death rate per 1,000 per annum for the month; non-residents excluded:

White	12.81	11.56
Colored	23.45	19.42
Total	15.68	13.68

Deaths from premature births, violence, etc., are not excluded.

EMILE LOUIS,
Statistician, City Board of Health.



BRINGING THE X-RAYS TO THE PATIENT

A FEW YEARS AGO the best mobile X-Ray Unit was owned by the U.S. Army. The equipment comprised a motor truck on which a Delco generator and Victor X-Ray Unit with current controlling devices were mounted.

From this has evolved the Victor Stabilized Mobile X-Ray Unit of the present, the highest perfection yet attained in apparatus of this type.

It was Victor research and development work that made this astonishing result possible—research which culminated in the self-rectifying "Radiator" Type Coolidge Tube. The X-rays are now easily brought to the bedside of the patient too weak to be moved to the X-ray room.

This Victor Mobile Unit is more efficient than even the larger and heavier apparatus of ten years ago. Its milliamperage is 30, which is a gauge of its powers. Moreover, it is provided with the Victor-Kearsley Stabilizer which insures uniformly good results in spite of current fluctuations in the line. Only Victor Mobile X-Ray Units are thus equipped.

A circuit breaker also incorporated in this unit guards against damage to the X-ray tube and apparatus, by automatically shutting off the current from the supply line in case of "over-load," i. e., current beyond the capacity of the tube, or in case of short circuit or ground. Obviously, this same device becomes important from the standpoint of safety to both operator and patient.

This Mobile Unit has been designed to meet every requirement for practical radiographic and fluoroscopic diagnosis.

An exhaustive descriptive circular will be sent on request

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